APRIL 1, 1952

MODERN MEDICINE

The Journal of Diagnosis and Treatment

Dr. Henry J. John (*see page 11*)

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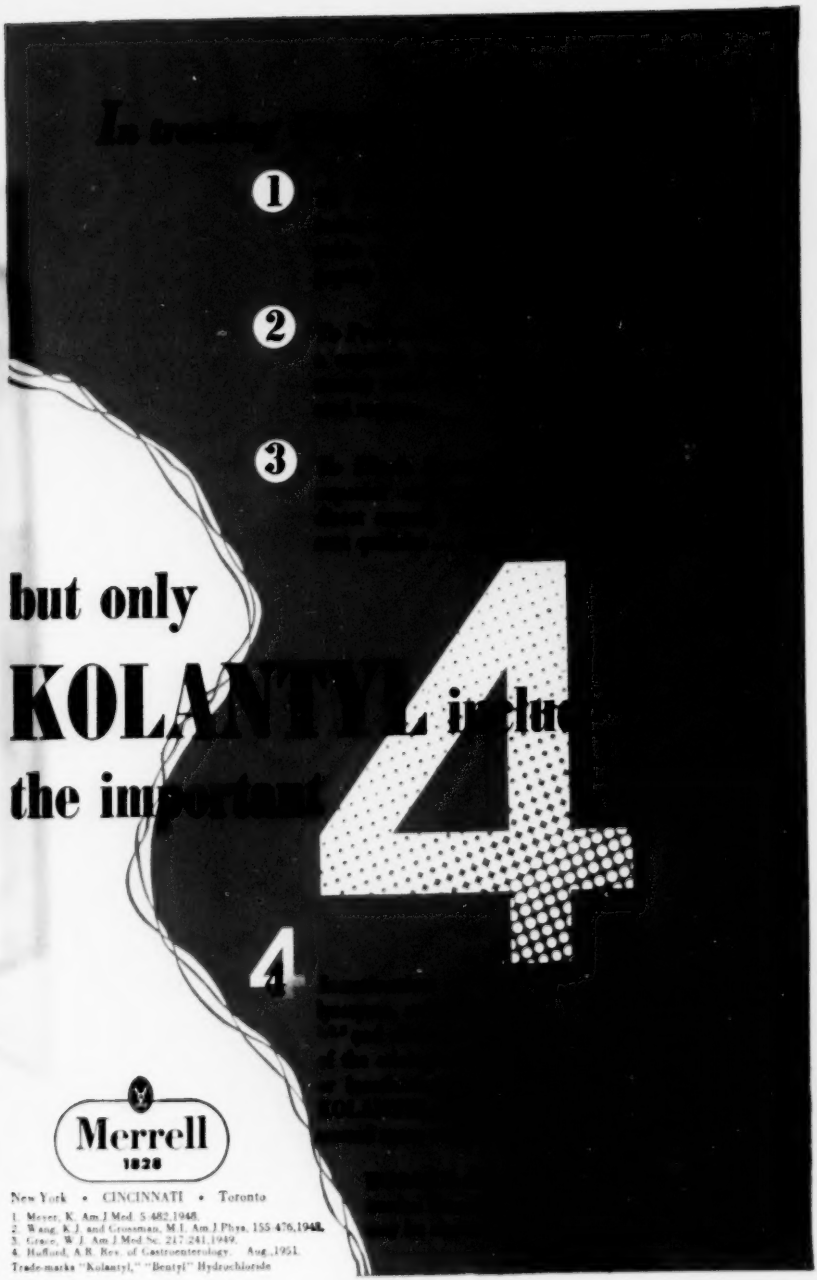

Merrell
1828

New York • CINCINNATI • Toronto

1. Meyer, K. Am J Med. 5:482,1948.
2. Wang, K.J. and Grossman, M.I. Am J Phys. 155:476,1948.
3. Grace, W.J. Am J Med Sc. 217:241,1949.
4. Mulford, A.R. Rev. of Gastroenterology. Aug.,1951.

Eliminate the needle!

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PENALEV®, Soluble Tablets Crystalline Potassium Penicillin G, dissolve promptly in liquids—particularly useful for administration to infants with regular bottle feedings. PENALEV Tablets obviate the discomfort resulting from injection therapy and the difficulty encountered in administering large, hard-to-swallow penicillin tablets currently in use. PENALEV Tablets are supplied in packages of 12, 24 and 100 (50,000 units), packages of 12 and 100 (100,000 units), and in packages of 12 (250,000 units). Sharp & Dohme, Philadelphia 1, Pennsylvania.

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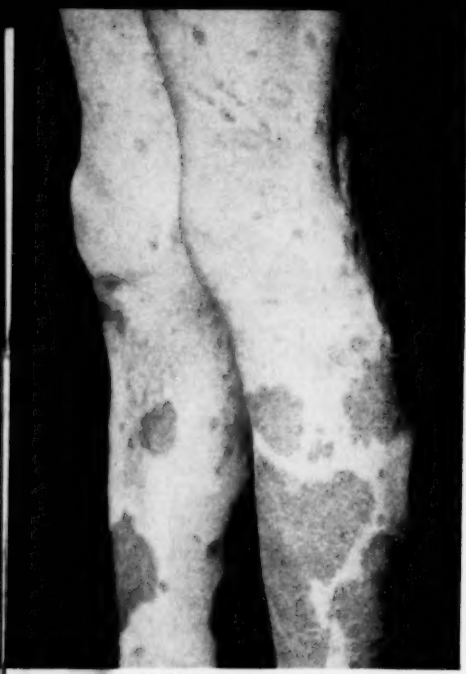
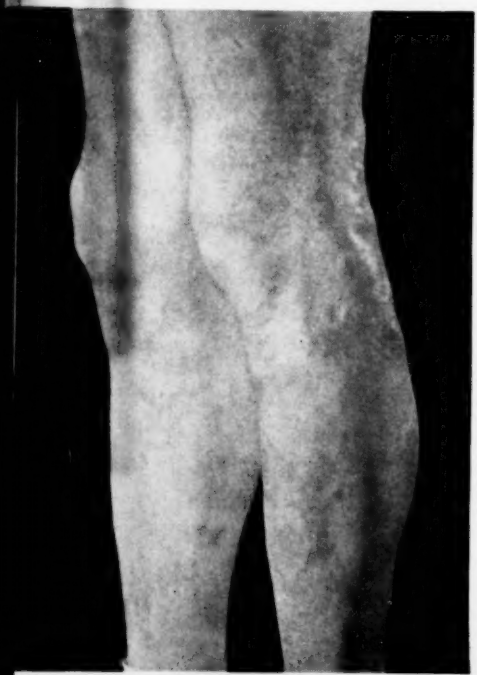


BEFORE Use of RIASOL



AFTER Use of RIASOL

APRIL *Looking Ahead* JUNE

in

PSORIASIS *treated with* RIASOL

It may take about 8 weeks to clear up the ugly skin patches of psoriasis with **RIASOL.** To be exact, the statistical analysis of a series of severe cases treated with **RIASOL** showed disappearance or great improvement of the cutaneous lesions in periods ranging from 2 to 13 weeks, average 7.6 weeks.

Your patient, male or female, is looking ahead to the summer season. He or she may wish to wear bathing suits, shorts or slacks. It is a matter of great importance, therefore, to clear up the disfiguring skin patches with **RIASOL** as early as possible.

It is the deeper action of **RIASOL,** reaching the epidermal layers where the lesions originate, that is responsible for the speed of the therapeutic result.

RIASOL contains 0.45% mercury chemically combined with soaps, 0.5% phenol and 0.75% cresol in a washable, non-staining, odorless vehicle.

Apply daily after a mild soap bath and thorough drying. A thin, invisible, economical film suffices. No bandages required. After one week, adjust to patient's progress.

Ethically promoted **RIASOL** is supplied in 4 and 8 fld. oz. bottles, at pharmacies or direct.

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Please send me professional literature and generous clinical package of RIASOL.

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RIASOL FOR PSORIASIS

to prevent attack in angina pectoris

Important new drug

The introduction of Peritrate for prophylactic management of angina pectoris coincided with publication of three clinical papers by authoritative investigators. *Their findings:*

1. Peritrate prevented anginal attacks in 3 out of 4 cases. 78.4% of patients experienced fewer attacks. "Peritrate was more effective"[1] than other currently used medications.

2. Peritrate reduced the severity of attacks not prevented. "The attacks were less intense and of shorter duration in some patients."[1]

3. Peritrate has a notably low incidence of side effects. "There were no side effects which could be unequivocally attributed to the drug."[2]

4. Peritrate appears to have a beneficial effect on intermittent claudication. "Patients with a combination of angina pectoris and angina cruris will show improvement in . . . both conditions."[3]

You can prescribe now. Peritrate can be prescribed through most pharmacies in 10 mg. tablets (bottles of 100 and 500). Dosage: For continuing prophylactic action 1 tablet 3 or 4 times daily should be taken on a continuous schedule.

References: 1. Humphreys, P., et al.; 2. Perlman, A.; 3. Samuels, S. S. et al.: Angiology 3:1, 16, 20 (Feb.) 1952.

Peritrate

TRADEMARK

CHILCOTT *Laboratories, INC.*

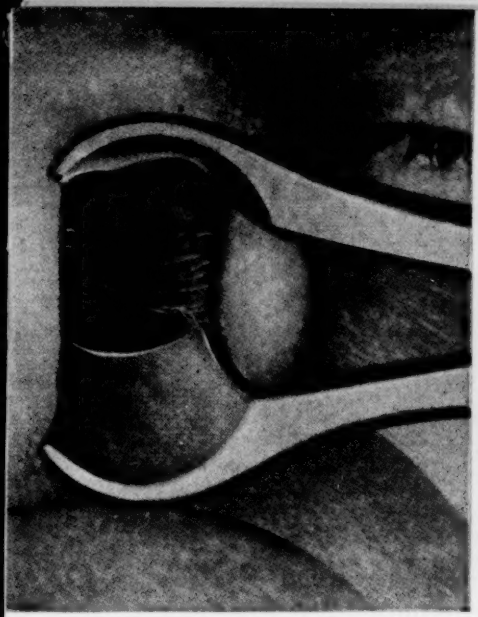
MORRIS PLAINS, NEW JERSEY

FORMERLY THE MALTINE COMPANY

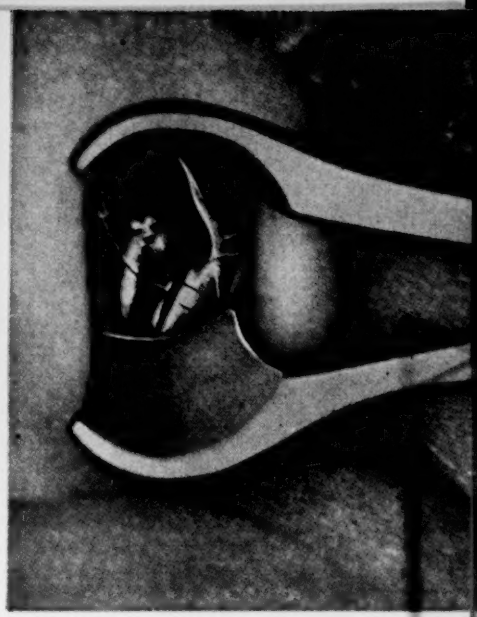
MODERN MEDICINE

THE JOURNAL OF DIAGNOSIS AND TREATMENT

Published twice monthly by Modern Medicine of Minneapolis, Minn., at 55 East 10th Street, St. Paul 2, Minn. Acceptance under section 34.64, P. L. & R., authorized.



Before intranasal administration of Paredrine-Sulfathiazole Suspension.



After instillation of the Suspension in the Proetz—or head-low—position.

(Photographs slightly enlarged.)

These photographs show the advantages of a SUSPENSION in treating INTRANASAL INFECTIONS

Paredrine-Sulfathiazole Suspension—unlike antibacterial agents in *solution*—does not quickly wash away. It clings to infected areas for hours—assuring prolonged bacteriostasis. When instilled in the Proetz position, it reaches *all* of the sinal ostia, thus helping to prevent sinusitis.

Paredrine-Sulfathiazole Suspension is the most widely prescribed sulfonamide nose drop. No instances of sensitivity to its use have ever been reported.

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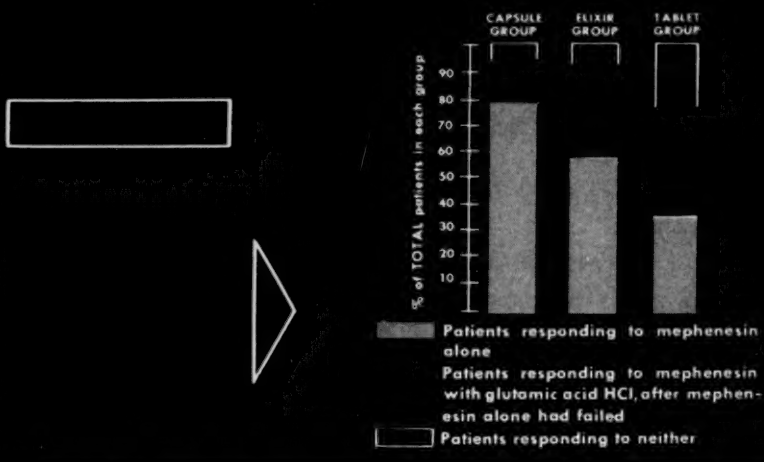
Paredrine-Sulfathiazole Suspension

vasoconstriction in minutes . . . bacteriostasis for hours

'Paredrine' T.M. Reg. U.S. Pat. Off.

MODERN MEDICINE

THE JOURNAL OF DIAGNOSIS AND TREATMENT



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Each TOLAMIC capsule provides:
Mephenesin . . . . . 0.25 Gm.

plus

Glutamic Acid
Hydrochloride . . . . . 0.25 Gm.

"Until this combination therapy has failed, mephenesin should not be discarded as ineffectual."[1]

SUPPLIED:

K·U

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for
April 1
1952

Modern Medicine
Vol. 20, No. 7

THE MAN ON THE COVER is Dr. Henry J. John of Cleveland, a diplomate of the American Board of Internal Medicine. Dr. John is on the staff of Lakeside Hospital and is a member of the American Diabetes Association, Association of Military Surgeons of the United States, American Therapeutic Society, Association for the Study of Internal Secretions, and the Central Society for Clinical Research. A lieutenant colonel in the Army Medical Reserve Corps, Dr. John now maintains a private practice. The review on page 71, "Liberal Diets for Diabetic Patients," is based on a report presented to the American College of Physicians and published originally in the *Annals of Internal Medicine*.

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Contents for April 1 1952

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MODERN MEDICINE, The Journal of Medical Progress, of Minneapolis, Minn., is published twice monthly on the first and fifteenth of each month, at 55 East 10th Street, St. Paul 2, Minn. Subscription rate: $5.00 a year, 25c a copy. Business Manager: M. E. Herz. Address editorial correspondence to 84 South 10th Street, Minneapolis 3, Minn. Telephone: Bridgeport 1291. ADVERTISING REPRESENTATIVES: New York 17: Lee Klemmer, Bernard A. Smiler, John Winter, 50 East 42nd Street, Suite 401. Telephone: Murray Hill 2-8717. CHICAGO 6: Jay H. Herz, 20 North Wacker Drive, Suite 1921. Telephone: Central 6-4619. SAN FRANCISCO 4: Duncan A. Scott & Co., Mills Bldg. Telephone: Garfield 1-7950. LOS ANGELES 5: Duncan A. Scott & Co., 2978 Wilshire Blvd. Telephone: Dunkirk 8-4151.

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Proving Clinically that Protamide is Dramatic in the Therapy of .....

HERPES ZOSTER

The accumulated reports of the last decade from intensive investigation, give clinical evidence that Protamide has resolved the difficult therapeutic problem of herpes zoster.

These reports suggest that Protamide provides more than symptomatic relief. For example: Marsh points out that vesicles and crusts disappear much more rapidly with Protamide therapy than in untreated cases.

A significant factor in practical application is the report that Protamide is superior in the relief of pain of herpes zoster to that obtained with other commonly used treatments.

Authoritative sources also establish Protamide as non-toxic and safe [1-2] even over long periods of treatment (as in tabetic pain [2-3] management). Protamide has the advantage of comparative freedom of pain on administration[4]. Protamide is stable indefinitely.

1. *Lehman, Arnold J.; Chase, Harold F.; Yonkman, F. F.; Urologic & Cut. Rev. 43: 378 (Aug.) 1944.*
2. *Lehrer, H. W.; Lehrer, D. R.; Lehrer, H. G.; Ohio State Medical J., P. 44 (Jan.) 1951.*
3. *Costello, Russell T.; Urologic & Cut. Rev. 51:260 (May) 1947.*
4. *Marsh, W. C.; U. S. Armed Forces Med. J. 1:1045 (Sept.) 1950.*

A card or your prescription blank marked "Protamide" will bring both literature and reports.

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LETTER FROM THE EDITOR

Dear Reader:

Does your guard go up when your wife asks, "Notice anything different, dear?" We know how it is with us. Not wanting to be caught lacking in appreciation, we glance hurriedly at her dress, her hairdo, her shoes, and then come up with the wrong answer. The question ought to be barred.

There is something different about this issue of *Modern Medicine,* but we aren't going to ask you to guess what. We are going to tell you. *Modern Medicine* is set in a new type face. It is a type designed for easy reading. The letters are bigger and a little bit blacker than we have been using. They stand taller and fit into our columns better. They cut down on eye fatigue.

Although our staff is quite excited about the change, it is one that you would hardly be aware of, for the type is unobtrusive. Deliberately so, for the designer wants you to concentrate on the content, not on the type. And that is the reason our publisher adopted the type, too.

The type is called Times Roman. It was designed especially for the *London Times* twenty years ago and has since been taken up by many other newspapers and magazines. It has lived up to all expectations, and every day new uses are being found for this clear, legible type.

We think that Times Roman is a fitting vehicle to carry the message of scientific progress in medicine. We trust that its honest outlines will be easy on your eyes and help to make *Modern Medicine* an even greater favorite with you.

Walter C. Alvarez

EDITOR-IN-CHIEF

when psychic distress is the cause of overeating

'Dexamyl' relieves Psychic Distress. Dexamyl* supplies the antidepressant action of Dexedrine* Sulfate and the calming, euphoric effect of Amobarbital to relieve the psychic distress that causes overeating *and overweight.*

'Dexamyl' also curbs Excessive Appetite. 'Dexamyl' supplies the appetite-curbing effect of 'Dexedrine' Sulfate.

each **'Dexamyl'** tablet contains 'Dexedrine' Sulfate (dextro-amphetamine sulfate, S.K.F.), 5 mg.; and Amobarbital (Lilly), ½ gr. (32 mg.).

*T.M. Reg. U.S. Pat. Off. **Smith, Kline & French Laboratories, Philadelphia**

Correspondence

Communications from the readers of MODERN MEDICINE *are always welcome. Address communications to The Editors of* MODERN MEDICINE, *84 South 10th St., Minneapolis 3, Minn.*

Urinary Bilirubin Test

TO THE EDITORS: About a year ago, I prepared some tablets out of plaster of paris and barium chloride for the detection of bilirubin in urine, following the directions given in a copy of *Modern Medicine*.

Now I can find neither the copy of the magazine nor the reference slip in my files, nor do I have an index. Could you kindly forward me either an index or a reprint of this short article so that I may have some more tablets prepared?

P. H. GUTZLER, M.D.

River Falls, Wis.

¶ The article, by Dr. Murray Franklin, appeared on page 42 of the Dec. 1, 1949 issue of *Modern Medicine*.—Ed.

Parallel to Diagnostix

TO THE EDITORS: In my opinion, the final conclusion in Diagnostix Case MM-208 (*Modern Medicine*, Feb. 1, 1952, p. 140): "It's a fine point that comes with experience" may be tragically misleading. The case almost exactly parallels one seen by me and many others about three years ago with one important exception—at autopsy this woman had a sphenoidal ridge meningioma.

JOHN O. GOODSELL, M.D.

Detroit

Pancreatic Drainage

TO THE EDITORS: In answer to Dr. S. Albert Sarkisian (*Modern Medicine*, Feb. 1, 1952, p. 26) as to how long T-tube drainage should last in pancreatitis, I wish to refer him to my original work "Pancreatite et Cholecystite" published in *Mémoires de l'Académie de chirurgie*, Paris, Feb. 9 and 16, 1949.

I drain the pancreas through the gallbladder by means of an anchored rubber tube with absorbable catgut suture. As long as there is pancreatic drainage the tube will stay; it falls off by itself after the pancreas functions normally again.

A fistula remains for a time proportionate to the dysfunction of the pancreas. Once the pancreas becomes normal, the fistula closes by itself. I have seen no recurrences of pancreatitis or cholecystitis since 1934, when I started this procedure.

AARON N. GORELIK, M.D.

Bronx

Most Concise

TO THE EDITORS: I feel that *Modern Medicine* is one of the best and most concise of all the medical periodicals, journals, and publications.

ARTHUR K. BELL, M.D.

Toledo

potent protection against
the combined threats of
atherosclerosis and capillary fragility

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The average daily dose (6 tablets) provides:			
Choline	1 Gm.	Pyridoxine HCl	4 mg.
Inositol	1 Gm.	Rutin	150 mg.
dl-Methionine	500 mg.	Ascorbic Acid	75 mg.
SUPPLIED: Bottles containing 100 tablets			

Excellent Symposium

TO THE EDITORS: Dr. Arild E. Hansen should be congratulated not only upon the excellent organization of the Symposium on Rheumatic Fever (*Modern Medicine*, Oct. 1, 1951), but also for the thorough and critical way in which his students presented the material.

B. M. KAGAN, M.D.

Chicago

Lessons from War

TO THE EDITORS: In *Annals of Surgery* for September 1949, Dr. Fred W. Rankin's presidential address before the American Surgical Association is printed in full. It is a complete review of the outcome of casualties for the World War II period, and covers more than four years. Doubtless further reports will come, and in a sense the present one is preliminary, but it serves well to inform us of some very important conclusions based upon experience to date.

Comparisons with World War I are inevitable, and it would be surprising, indeed, if we did not note improvements in management of wounds. For example, the mortality rate from wounds during World War I was 8.1 versus a rate of 3.3 for World War II.

Deaths from wounds of the head, chest, and abdomen in the later conflict were nearly 65% lower. This may be accounted for by better organization, many well-trained young surgeons, better immediate care at the front line, and immediate transportation, chiefly by air, to great centers functioning twenty-four hours a day.

(*Continued on page 24*)

The new antispasmodic

BUTISOL-BELLADONNA

. . . produces a more effective antispasmodic action than either belladonna or Butisol Sodium alone,

. . . provides Butisol Sodium, the "daytime sedative", with mild, relatively prolonged action most useful in "functional disorders" and "certain organic diseases"[1],

. . . with naturally occurring belladonna—not the synthetic alkaloids,

. . . is unusually palatable—a light, pleasant tasting elixir, colored an attractive orange-red.

FORMULA:

5 cc. (one teaspoonful) of the elixir represents:

Butisol Sodium (Sodium 5-Ethyl-5-Secondary Butyl Barbiturate McNeil) . . . . . 10 mg. (1/6 gr.)

Ext. Belladonna . . 15 mg. (1/4 gr.)

SUPPLIED:

Elixir Butisol-Belladonna in bottles of one pint and one gallon.

Samples on request.

1. Dripps, R. D.: Selective Utilization of Barbiturates, J.A.M.A. *139*:148-150 (Jan. 15) 1949.

McNEIL

LABORATORIES, INC.

Emergency measures were well understood by the rank and file of medical attendants as well as medical graduates. Blood and blood plasma, the antibiotics and chemotherapeutic agents, and the avoidance of mishandling in skull and limb fractures were of great importance in keeping mortality low. Wound management followed the outline of prompt and complete debridement of nonvital tissues, delayed wound closure in order not to "sew up infection," and ultimately reconstructive surgery—all well established in standard procedure.

A decision on whether or not to delay an operation is always an important matter. When a man was not *in extremis*, the rule was to "wait and see." This was observed especially in head wounds and fractures of the skull. If a soldier's general condition was becoming worse and it was a matter of life or death, the chance for survival was taken against an almost certain fatality if waiting were prolonged.

The division of neurosurgery has done a splendid job in rehabilitating men who in former years remained crippled for life. The paraplegics were, of course, the most disturbing, since spinal cord injuries are so difficult to heal with good function, but the excellent results are astonishing for men with partial or complete loss of function in nerves to the limbs and face.

Vascular injuries such as arteriovenous aneurysms and fistulas were "cured" through operations. In 803 operations in the three centers—Ashford General, Mayo General, and DeWitt General—there were only 4 deaths!

Abdominal wounds, which used to be so uniformly fatal from com-

plicating peritonitis, had the mortality rate reduced from 60 to 75% in World War I to 25 to 35% in World War II. A favored technic was to "exteriorize the colon" and, in rectal wounds, to perform a temporary colostomy.

An important omission was discontinuance of the sulfonamides in intraabdominal surgery because adhesions and intestinal obstruction so often occur after use of these chemotherapeutic agents.

Wounds of the liver gave much concern to the surgeon, because they were usually extensive and, therefore, put this vital organ entirely out of function. However, immediate surgery did save more lives than expected.

The thoracic division was major in every aspect. It always has been but, owing to improvements in anesthesia, the approach to the problem at hand, and the development of great skill in thoracic surgery, much was accomplished. For example, blood in the pleural cavity used to be left in situ or was treated expectantly. Time was lost, since the clotted blood became infected or fibrotic and led to chronic illness. Now the hemorrhage is controlled, the blood is removed, and expansion of the lung is undertaken at the earliest possible moment. In bronchiectasis, if treatment by bronchoscopy is ineffective, the diseased portion of a lung is removed surgically.

Speaking of bronchoscopy, those unfortunates who previously were "drowned in their own secretions" are now saved by direct tube and aspiration of obstructing material.

No report of this kind could be complete without paying tribute to the wonders of plastic surgery. Rankin credits these special surgeons

When the problem is *more than spring-fever*

Effective control of iron-deficiency anemia is possible with just 3 IBEROL tablets a day. Here's why:

IBEROL therapy takes into consideration the concept that satisfactory hemoglobin formation may involve more than iron alone—that where iron deficiency is established other deficiencies may coexist.

In just 3 tablets a day—one after each meal—IBEROL provides a therapeutic dose of sufficient iron (210 mg. elemental iron) plus generous amounts of vitamin B_{12}, folic acid and other B complex vitamins as well as standardized stomach-liver digest and ascorbic acid.

The secret of IBEROL potency and compactness is in the ingenious pharmaceutical technique of using the iron content itself as one of three coatings to protect the vitamins. An outer sugar-coating gives the easy-to-swallow tablet a pleasant odor and taste.

For prophylaxis in old age, convalescence or pregnancy, one or two tablets daily are usually enough. In pernicious anemia, IBEROL may be used as a supplemental hematinic. IBEROL tablets are available in bottles of 100, 500 and 1000. Abbott

THREE IBEROL TABLETS: the average daily therapeutic dose for adults, supply:

Ferrous Sulfate (representing 210 mg. elemental iron, the active ingredient for the increase of hemoglobin in the treatment of iron-deficiency anemia)	1.05 Gm.
Plus these nutritional constituents:	
Vitamin B_{12}	30 mcg.
Folic Acid	3.6 mg.
Stomach-Liver Digest	1.5 Gm.
Thiamine Mononitrate (6 times MDR*)	6 mg.
Riboflavin (3 times MDR*)	6 mg.
Nicotinamide (2 times RDA†)	30 mg.
Pyridoxine Hydrochloride	3 mg.
Pantothenic Acid	6 mg.
Ascorbic Acid (5 times MDR*)	150 mg.

*MDR—Minimum Daily Requirement
†RDA—Recommended Daily Dietary Allowance

PRESCRIBE **Iberol**®

(IRON, B_{12}, FOLIC ACID, STOMACH-LIVER DIGEST, WITH OTHER VITAMINS, ABBOTT)

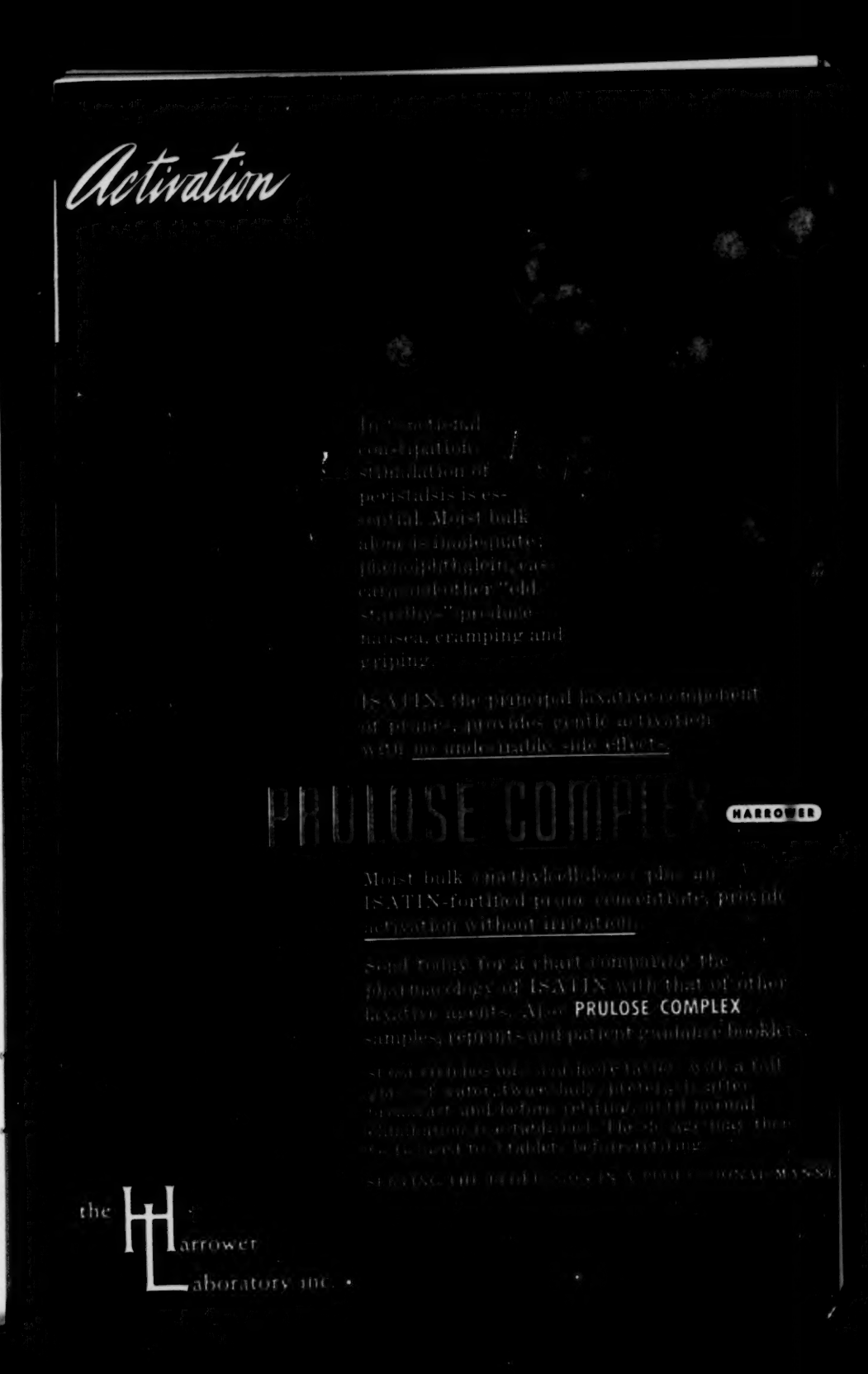
with performing some 40,000 operations without mortality! The average number of operations was 3 for each patient; statistics show 33,000 operations for some 11,000 persons. Unfortunately, since these patients had to be carried through until everything possible was done, plastic surgeons were held in the Army for at least a year longer than their confreres.

Dr. Rankin sums up the "do's" and "don'ts" seen in World War II by plastic surgeons as follows:

- No tannic acid in burns
- No trauma by mishandling
- Pressure dressings to conserve serum, then skin grafting as soon as possible
- Early closure of wounds, after moderate cleansing, by suture or skin graft
- Immediate care of burns and facial injuries in specialized centers by special teams, thus shortening the time consumed in the Zone of the Interior
- Extensive use of local tissues in repairing
- Wound closure and healing before any orthopedic or neurosurgical procedures
- Adoption of the concept that poor surface healing always means poor deep healing
- Cooperation with dentists, anesthetists, orthopedists, and neurosurgeons
- Use of special devices and procedures in surgery of the face, jaws, nose, ears, hands, and feet.

The analysis of war wounds and their care will, in future, lead to greater and better treatment of like conditions in civilian life.

IRVING W. VOORHEES, M.D.
New York City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Questions & Answers

All questions received will be answered by letter directed to the petitioner; questions chosen for publication will appear with the physician's name deleted. Address all inquiries to the Editorial Department, MODERN MEDICINE, *84 South Tenth Street, Minneapolis 3, Minnesota.*

QUESTION: Can one develop a tolerance for ammonium chloride when taken continuously for Ménière's disease?

M.D., Florida

ANSWER: *By Consultant in Pharmacology.* Ammonium chloride when taken in large quantities produces incipient acidosis accompanied by considerable diuresis. Little tolerance is developed except for the patient's capacity to endure the symptoms of incipient acidosis.

QUESTION: Is microwave diathermy preferable to standard short-wave diathermy?

M.D., Ohio

ANSWER: *By Consultant in Physical Medicine.* Since microwaves are about 10 cm. in length, their behavior is very similar to that of light. The wave can be beamed and focused much the same as visible or infrared radiation can be focused. This property is advantageous in the application of heat to a particular part of the body. The director is placed at a distance and the beam of microwaves directed at the desired spot.

Just as radiant heat may be focused on one spot, so may microwave heating be concentrated to overheat an area of the body. Heat energy reaching the surface of the body from the microwave machine is inversely proportional to the square of the distance. On rounded contours or over bony prominences, the closest part of the body will receive the greatest amount of heat. This fact must be kept in mind and proper precautions taken.

In the past, one of the defects of microwave diathermy was lack of a suitable large director for heating large surfaces of the body. An 18-in. director now has been developed. Microwave diathermy seems adequate for many situations in the clinic and is an acceptable apparatus useful in producing heat. Whether microwave diathermy is superior to standard short-wave diathermy is doubtful.

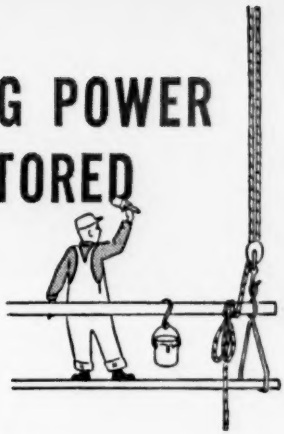
QUESTION: How is the Master two-step test used for securing evidence of coronary insufficiency?

M.D., Idaho

ANSWER: *By Consultant in Internal Medicine.* For the Master test, a contrivance is used consisting of two steps, each 9 in. high. The patient walks up one side of the steps and down the other, then turns and ascends in the opposite direction. The patient's weight multiplied by the

(Continued on page 34)

EARNING POWER RESTORED



DARTHRONOL systemic rehabilitation has helped to restore earning power and to re-establish self-reliance in thousands of chronic arthritics.

With adequate dosage of Vitamin D together with nutritional supplementation of 8 other Vitamins, DARTHRONOL is an integral part of the anti-arthritic regimen.

Help restore your patients' independence with DARTHRONOL.

Each Capsule Contains:

Vitamin D	50,000 USP Units
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Vitamin C	75 mg.
Vitamin B_1	3 mg.
Vitamin B_2	2 mg.
Vitamin B_6	0.3 mg.
Niacinamide	15 mg.
Calcium Pantothenate	1 mg.
Mixed Tocopherols (Type IV)	4 mg.

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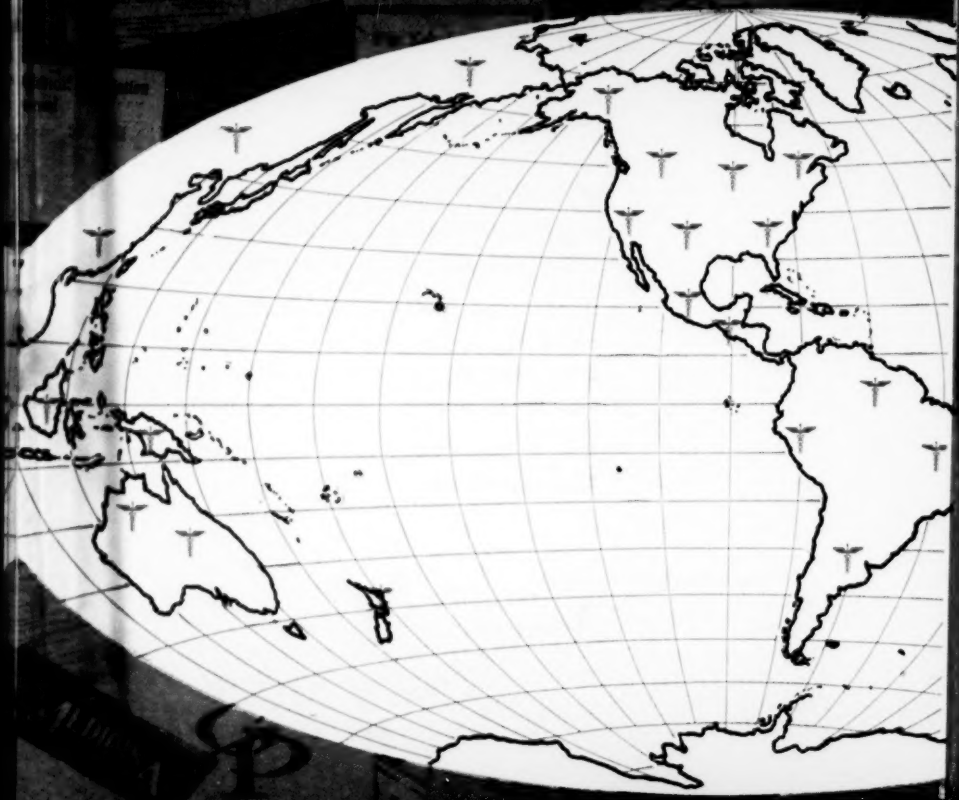

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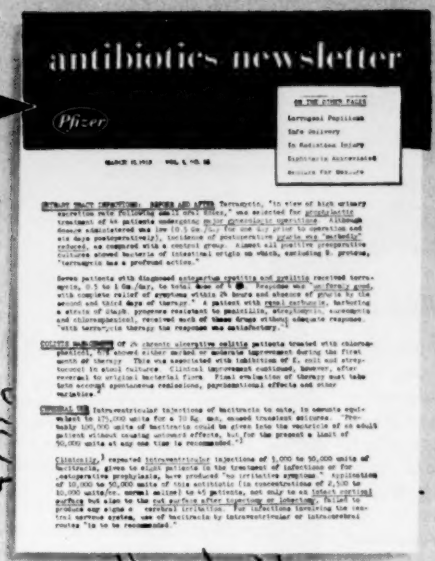
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ON THE OTHER PAGES

Terramycin Pessimism
Safe Delivery
In Radiation Injury
Septicemia Accelerated
Seizure for Obstetr

URINARY TRACT INFECTIONS: BEFORE AND AFTER Terramycin, "in view of high urinary excretion rate following oral dose," was selected for preoperative treatment of 44 patients undergoing major gynecologic operations. Although dosage administered was low (0.5 Gm./lb./day for one to two days prior to operation and six days postoperatively), incidence of postoperative sepsis was "markedly" reduced, as compared with a control group. Almost all positive preoperative cultures showed bacteria of intestinal origin on which, excluding B. proteus, "terramycin has a profound action."

Seven patients with diagnosed enterogenous cystitis and cystitis received terramycin, 0.5 to 1 Gm./day, to total dose of 5 [redacted]. Response was "uniformly good, with complete relief of symptoms within 24 hours and absence of sepsis by the second and third days of therapy." A patient with renal carbuncle, harboring a strain of staph. proteus resistant to penicillin, streptomycin, aureomycin and chloramphenicol, received much of these drugs without adequate response. "With terramycin therapy the response was satisfactory."

CYSTITIS AND CHANGES OF Of 24 chronic ulcerative colitis patients treated with chloramphenicol, 6 showed either marked or moderate improvement during the first month of therapy. This was associated with inhibition of E. coli and streptococci in stool culture. Clinical improvement continued, however, after reversal to original bacterial flora. Final evaluation of therapy must take into account spontaneous remissions, psychosomatical effects and other variables.

INTRATHECAL USE Intraventricular injections of bacitracin to cats, in amounts equivalent to 175,000 units for a 70 kg. man, caused transient seizures. Probably 100,000 units of bacitracin could be given into the ventricle of an adult patient without causing untoward effects, but for the present a limit of 50,000 units at any one time is recommended.

Clinically, repeated intraventricular injections of 1,000 to 50,000 units of bacitracin, given to eight patients in the treatment of infections or for meningeal prophylaxis, have produced "no irritative symptoms." Administration of 10,000 to 50,000 units of this antibiotic (in concentrations of 2,500 to 10,000 units/cc. normal saline) to 45 patients, not only to an intact cortical surface but also to the cut surface after laminectomy or injection, failed to produce any signs of cerebral irritation. For infections involving the central nervous system, use of bacitracin by intraventricular or intramedullary routes "is to be recommended."

With the issue of March 15, 1952, the ANTIBIOTICS NEWSLETTER began its second year of publication. Every two weeks the ANTIBIOTICS NEWSLETTER, prepared for physicians by the Medical Service Department, brings the doctor the latest information culled from more than 600 domestic and foreign journals . . . plus news of antiobiotic therapy and research reported at many medical meetings.

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number of ascents gives the foot pounds of work per minute. The percentage of efficiency is calculated by dividing the number of climbs the patient can actually perform by his theoretic limit as derived from tables of the standard number of ascents per minute.

To secure evidence of coronary insufficiency, electrocardiograms are made before and after the test and alterations in the S-T segment and T waves noted.

QUESTION: What is the latest treatment for miliary tuberculosis? About ten months ago a woman patient was diagnosed as having lupus erythematosus disseminatus and given cortisone treatment. Improvement was observed symptomatically, but when attempt was made to discontinue the medicine, relapse occurred. Six months ago she was thought to have virus pneumonia. Roentgenograms at that time showed some infiltration around the left hilus. Acid-fast bacilli were found in each of two specimens of sputum. Some fluid was demonstrated in the right costophrenic recess. Should the cortisone treatment be discontinued?

M.D., Texas

ANSWER: *By Consultant in Chest Diseases.* Much evidence exists that cortisone has a deleterious effect on tuberculosis. Probably in this case cortisone should be discontinued and the tuberculosis treated vigorously.

Streptomycin administered in 2-gm. doses daily for two weeks and 1 gm. daily thereafter for several weeks may be helpful. After this, 1 gm. of streptomycin every three days is usually effective. Throughout the entire course, 12 gm. of para-aminosalicylic acid divided into four equal doses should be given daily.

One assumes that the patient is restricted to bed during the entire period of drug treatment.

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Forensic Medicine

ARTHUR L. H. STREET, LL.B.

Prepared especially for Modern Medicine

PROBLEM: In a bastardy proceeding, could a finding of paternity rest in whole or in part upon testimony of a pathologist as to the result of blood tests, when it merely indicated a possibility of paternity?

COURT'S ANSWER: No.

The Ohio Supreme Court noted that biologic experts agree that test results showing mere possibility of paternity are valueless (102 N. E. 2d 450).

PROBLEM: A surgeon and an anesthetist were sued for alleged neglect in a gallbladder operation in which spinal anesthesia was used, supplemented by gas, oxygen, and ether. Expert medical testimony ascribed the patient's injury to toxic quality of the injected drug, and not to the defendants' neglect. Did the trial judge err in refusing to permit the jury to determine whether there was negligence, because there was some lay evidence upon which speculation might have been indulged in opposition to the expert testimony?

COURT'S ANSWER: No.

The U. S. Court of Appeals, Third Circuit, said that this case belonged to the class in which the legal presumption that a doctor has used due care can be overcome only by expert testimony. As belonging to the same classification, the court cited cases in which an eye was removed after cataract operations in Ohio; Montana and Washington cases of patients dying under anesthesia, in the latter of which it was claimed that a surgeon negligently failed to take blood tests; a North Dakota case of paralysis after a mastoid operation; and a California case in which a nerve was cut in a knee operation.

To illustrate situations in which medical testimony is not necessary to prove malpractice, the court cited cases of sponges, drains, and needles being left in incisions, and an Iowa case in which an instrument slipped in an adenoidectomy inflicting a severe wound (192 Fed. 2d 181).

PROBLEM: [1] Doctors belonging to the medical staff of a health care cooperative were excluded from a private hospital, independently of any alleged combination with others to hamper the doctors' practice. Was the exclusion illegal? [2] Was their exclusion from a municipal hospital solely because of their connection with the cooperativ illegal?

COURT'S ANSWERS: [1] No. [2] Yes.

The Washington Supreme Court cited decisions of appellate courts in Illinois, Texas, and Maryland in support of a ruling that it is within the discretion of the managers of a *private* hospital to exclude physicians, though licensed as such, from use of the hospital facilities.

But a different rule applies to *public* hospitals, whose managers

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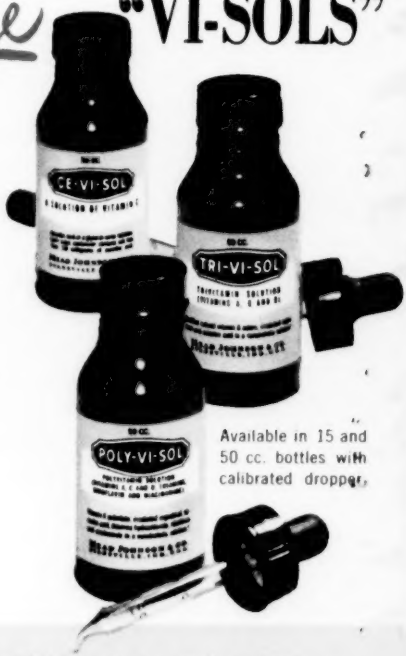

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cannot exclude a licensed doctor on an unreasonable, arbitrary, capricious, or discriminatory ground. Exclusion because of connection with a cooperative is an illegal ground. However, the court indicated that a *combination* of hospitals to exclude such doctors would constitute actionable restraint of trade which could be enjoined, regardless of whether the hospitals are private or public (237 Pac. 2d 737).

PROBLEM: Was an employer exonerated from liability in a workmen's compensation case for medical services secured by the injured employee, because the employee did not request that the employer furnish such services, when the proceeding was defended on the ground that the employer would not have been liable for medical care if it had been requested?

COURT'S ANSWER: No.

So decided the Essex County, N. J., County Court, Law Division (84 Atl. 2d 769).

PROBLEM: A surgeon employed to remove a patient's appendix and straighten her uterus discovered that the fallopian tubes and one ovary adhered to the uterus. He freed the tubes and ovary and removed a cyst from the ovary, incidentally resulting in removal of parts of the ovary. Was the surgeon liable in damages as having performed more surgery than authorized?

COURT'S ANSWER: No.

The Washington Supreme Court upheld the trial judge's dismissal of the suit.

The Supreme Court fully recognized that a surgeon may be held liable for injury to a patient resulting from unauthorized surgery but, in the light of medical testimony, concluded that removal of the cyst accorded with common practice and

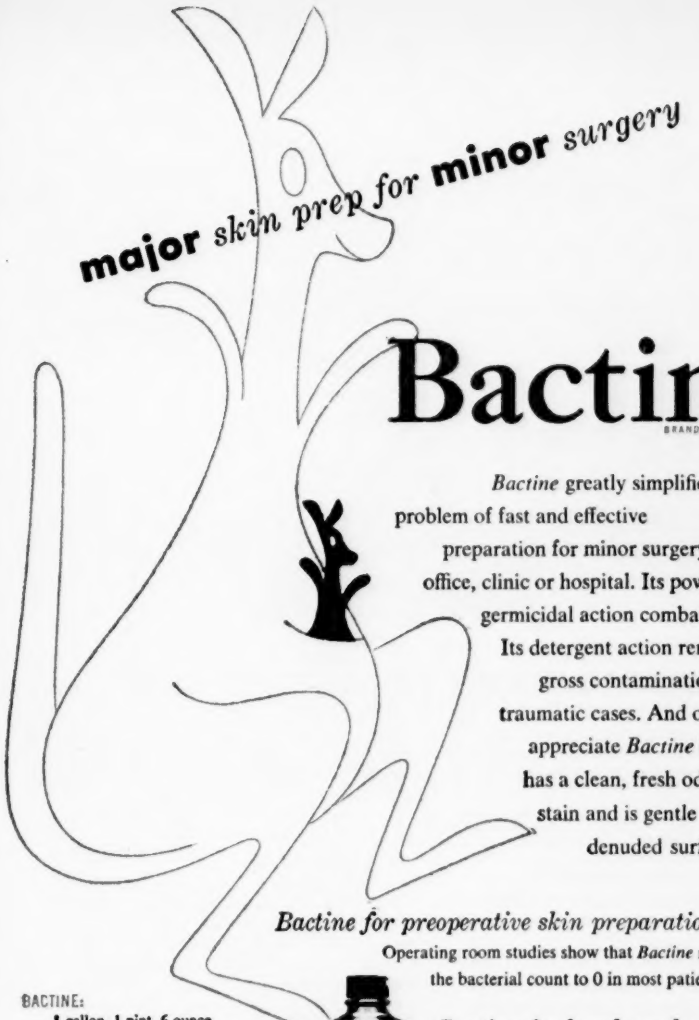
that "the breaking up of the adhesions in order to adjust the uterus was a necessary part of what he was requested to do."

The court decided that the patient not only failed to show that the surgeon exceeded his authority but also failed to substantiate her claim that her ability to become pregnant had been diminished by the operation (221 Pac. 2d 516).

PROBLEM: Lightning struck and broke a high voltage wire on a mining company's premises and, owing to negligent maintenance of an adjacent telephone wire, the broken wire fell across the telephone wire. The engineer in charge of the company's power station, after being shocked in attempting to use the telephone, found an employee unconscious or dead on the floor of the boiler room near another telephone and sent a messenger to get a doctor. The doctor responded to the call and, not knowing that the line was out of order, attempted to use the same phone to summon assistance. Was the company liable to the doctor for resulting injury?

COURT'S ANSWER: Yes.

The Pennsylvania Supreme Court decided that because it was impossible to telephone his superior for instructions, the emergency justified the chief engineer in summoning a doctor. That made the doctor an invitee upon the premises, to whom the mining company owed a duty to use reasonable care for his safety. The electric and telephone wires having been so carelessly maintained as to suggest the danger of possible contact between them, the company had failed to use proper care for the safety of those invited upon the premises. The circumstances reasonably justified the doctor in using the telephone without requesting permission to do so (99 Atl. 1008).



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Washington Letter

Doctor Draft Law Is Like a Shotgun over the Fireplace

FOR almost a year and a half, the doctor-dentist draft law has been on the books—Public Law 779 of the Eighty-first Congress. It is taken for granted by most physicians, who won't be affected by it except in a real emergency, if at all.

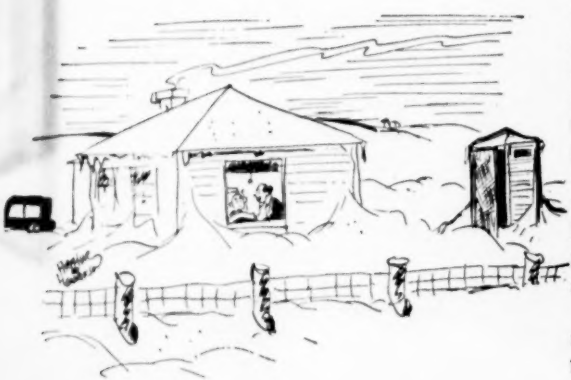
Actually, it is one of the most unusual manpower laws ever enacted by our Congress. Officially, it says in black and white that doctors and dentists have to register and that they face possible mandatory induction into the military services. But, practically, it resembles nothing so much as the old shotgun hanging over the fireplace; it's there for scare effect and probably will explode in your face if you pull the trigger.

The law was passed in the summer of 1951, when things were not going well in Korea. It was, in effect, a gentlemen's agreement to frighten 11,000 or so young physicians, and about a third as many dentists, into joining the reserves and volunteering for active duty.

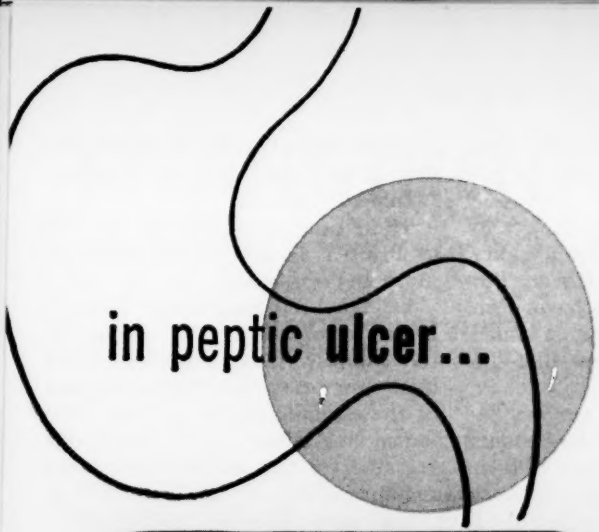
Even as Congress was passing the legislation, some members pointed out that it might well be found unconstitutional. Never before, they observed, had Congress directed conscription at a particular professional group. Up to that time, the criteria for military service had been just two: age and physical condition. Here was a new approach. Next, electricians might be drafted, possibly lawyers.

Was it constitutional? The question was never answered. And some Selective Service and military officials hope the Supreme Court never has to make the decision—at least not until some other way has been found to get professional men into the services when needed.

But for a year and a half, the shotgun over the fireplace has been doing its job. The young physicians and dentists



"You may have bathroom privileges."



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1. Offenkrantz, W. G.: Rev. Gastroenterol. *17*:359, 1950.

Rystan

at whom it was pointed have been falling into line and joining the reserves.

Once enrolled, they are subject to military orders and out from under the doctor-dentist draft threat. But not all these young men have been swayed from their paths; a small group are taking a chance that the gun isn't loaded.

As is well known, the act was designed to bring under military orders the men who got all or part of their educations at government expense during World War II or were deferred from service then so they could stay in school at their own expense.

Priority I consists of all such men who had less than ninety days of active duty, Priority II, those with more than ninety days but less than twenty-one months.

There are approximately 10,732 in Priority I, and a few thousand more in Priority II.

Of the total in Priority I, some 2,000 were found unfit physically for military duty. Another 1,500 have temporary deferments because of the essential nature of their civilian service. About 5,500 have joined the reserves and are on active duty or waiting orders. But there is still a hard core of about 1,000 who have been found physically fit for service, whose present work is not essential, but who have declined to join the reserves.

(Continued on page 50)

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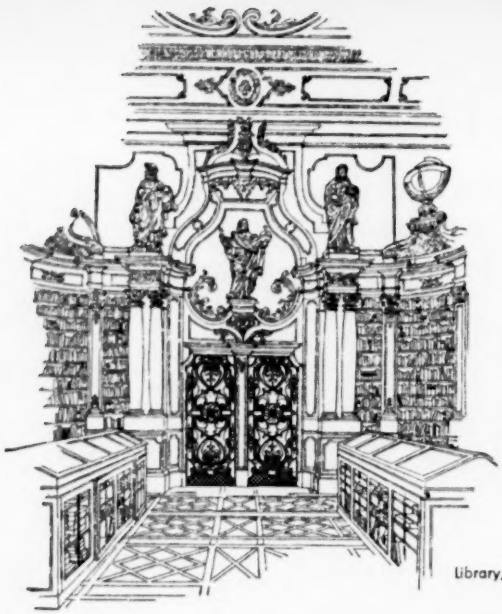

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468 Dewitt Street, Buffalo 13, N. Y.

1. Waters, E. G., and Wager, H. P.: Amer. J. Obstet. & Gyn. 60:885, 1950.

Most Selective Service officials believe the time has come to take the gun down from the shelf to see if it works.

Military medical chiefs, generally, aren't in favor of rough stuff; quite naturally they would prefer calling up men from the reserves, men who technically joined the reserves of their own free will, even if they were looking at the shotgun.

While that continues, SS officials argue, part or all of the 1,000 will be avoiding the duty the law was passed to impose upon them.

At any rate, a test of the law may start this spring, if the Army actually hauls off to camp large numbers of young doctors. Some, undoubtedly, will hire a lawyer. They will test the constitutionality of the law, not the fringe issues which now are being tried in the one court contest.

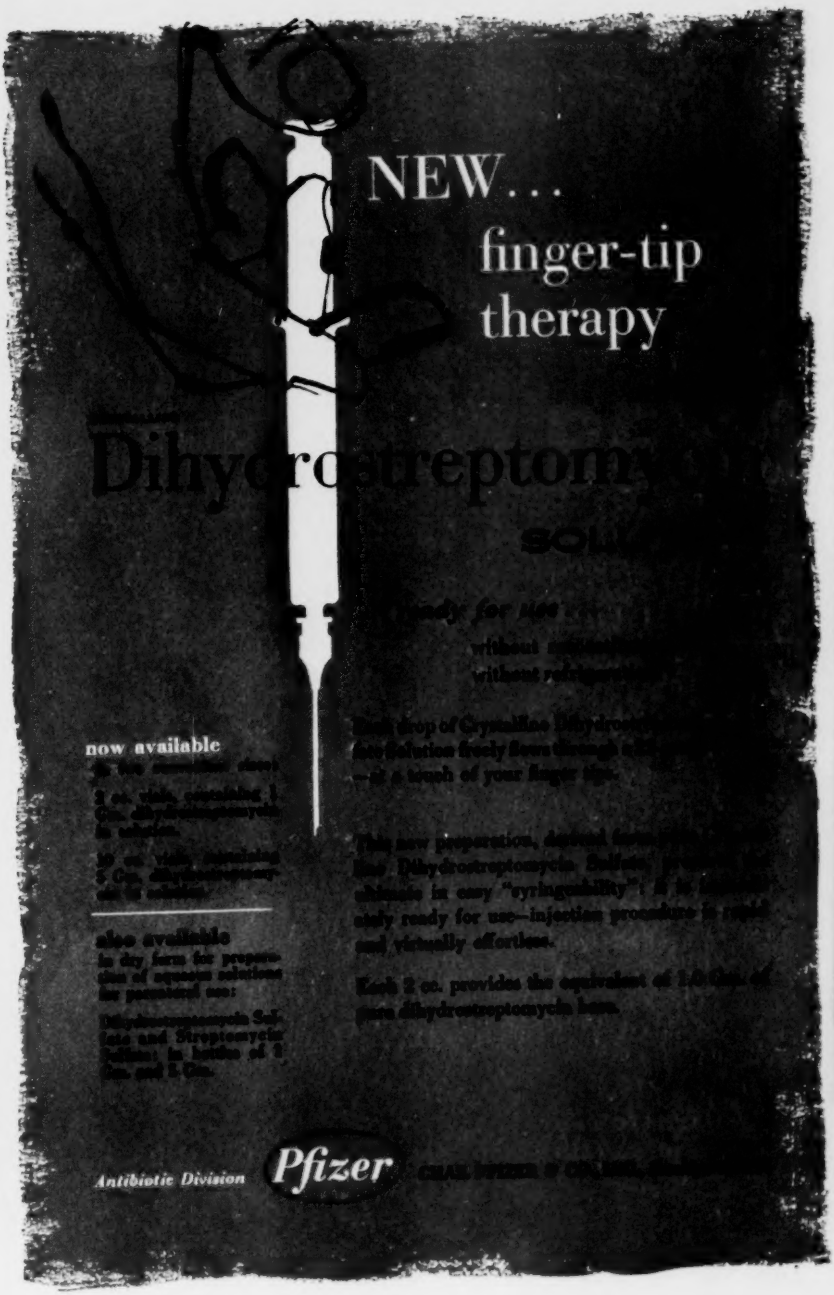
Student Deferments

While Congress was laboring over Universal Military Training legislation, a group of educators produced a 60-page report, *Education and National Security,* which proposes a new, nation-wide approach to the problem of deferring students.

The educators argue that the time-honored system of local draft boards deciding who is to stay in school and who is to put on a uniform has its disadvantages. One draft district might be overloaded with promising medical college material, for example, while an adjoining district might have only half a dozen young men of educational promise. Under pressure, draft board No. 1 would start using up its future doctors and engineers.

This report urges that, to preserve talent wherever it might be found,

(*Continued on page 57*)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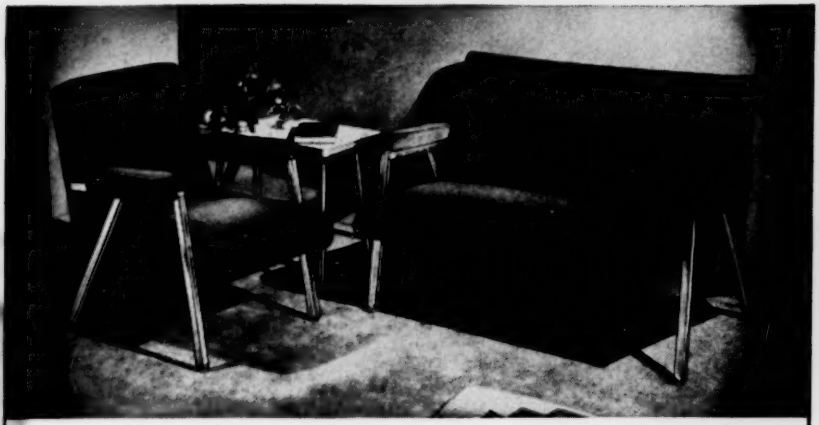

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***Calpurate* is also helpful in other cardiac conditions because it stimulates cardiac output.**

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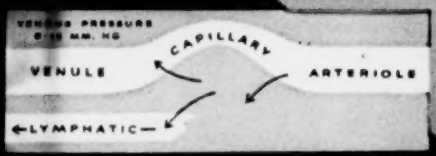
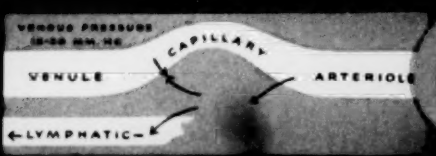


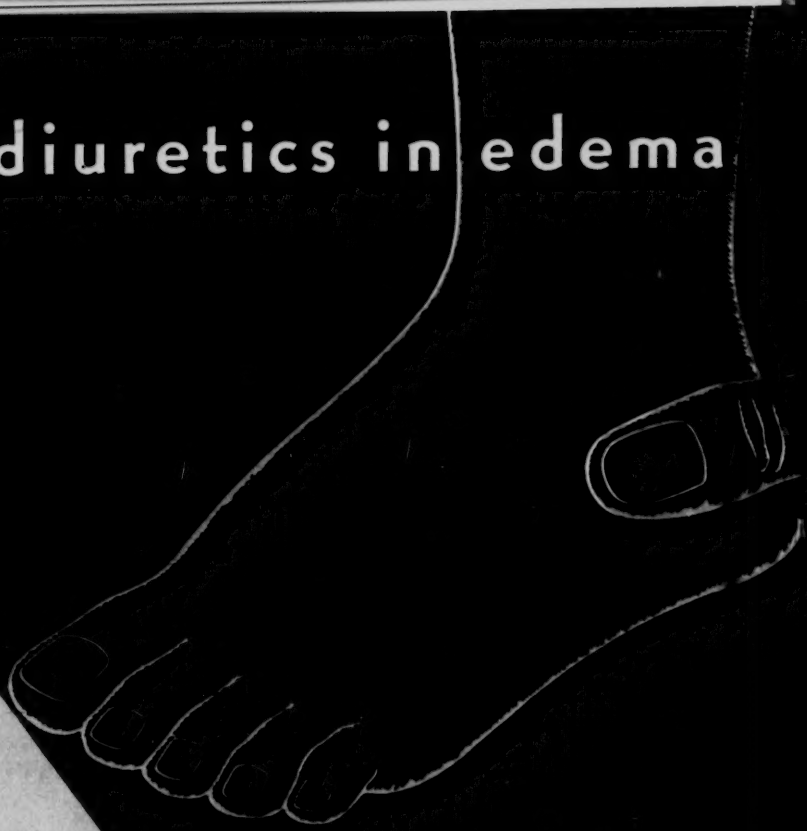
Normal exchange of fluids in tissues



Edema from increased venous pressure

Calpurate

# of diuretics in edema



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nation-wide educational or mental criteria be worked out. In some respects the plan resembles that now in effect for draft deferments, but it would go much farther in reducing local boards' great discretionary power.

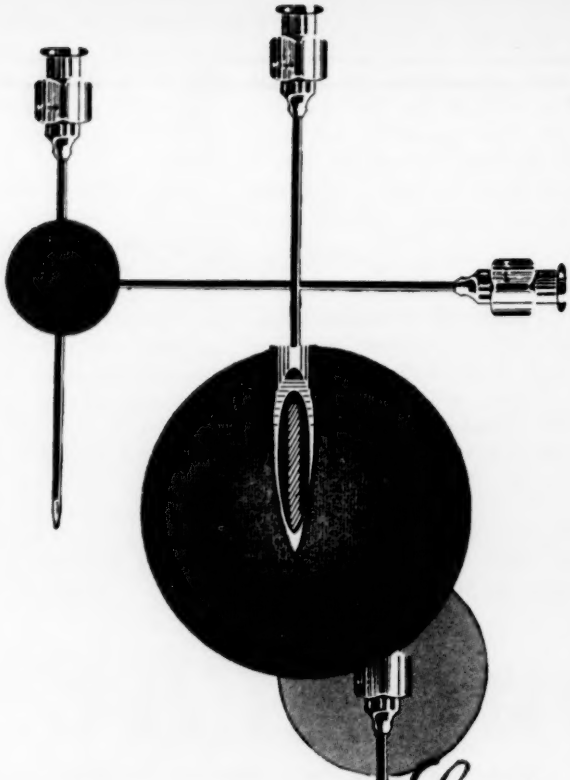
Static Electricity Danger

"There is probably no combination of equipment and activity anywhere more liable to produce casual, dangerous charges of static electricity than that found at present in the anesthetizing areas of most hospitals. . . . . Very few hospitals have made a studied and continued effort to apply effective remedies."

These blunt observations appear in a series of recommendations by the U. S. Bureau of Mines, whose experts have completed a two-year study of explosion hazards in hospitals.

The report comes to the rather dismal conclusion that protective measures have been recognized officially but are too often ignored for practical reasons. Now, the quantity of much of the material recommended by the experts to reduce hazard is limited. However, the report does list a number of suggestions that might be adopted without waiting for supplies to be increased. Most of them are concerned with use of conductive materials in anesthetizing locations, so that dangerous charges will not be built up.

(*Continued on page 62*)



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The Case of the UNKISSABLE LIPS

Fate often casts a fragile pattern. Whereas cosmetics have historically been used to enhance appearance and attract the opposite sex, here is a case in which a romance almost foundered over so trivial an object as a lipstick.

One morning, a very unhappy young lady presented herself in the office. A single glance was enough to ascertain the cause of her complaint, for her lips were swollen beyond normal proportions, they were fissured about the corners, and there was a dry exfoliation about the margins. She complained of intense burning and itching.

The situation was complicated by the fact that the young lady was expecting to be married shortly, but the swain, suspecting a more gross etiology, had cooled in his ardor. And quite naturally.

The patient was considerably reassured after physical and laboratory examinations were reported negative. Next, the history of a well rounded diet, and the lack of a characteristic glossitis ruled out possibility of a riboflavin deficiency. Next, it was ascertained that the condition was not traceable to trauma from lip biting, was not a drug eruption, nor due to eczema, lichen planus, or bullous erythema multiforme. It apparently settled down to a frank contact dermatosis. The next step was to attempt to determine the specific allergen or allergens.

In searching for the allergen or allergens, many substances were suspect. Medical literature reports many cases of allergy to such common substances as tooth pastes, denture creams, mouth washes, cigarette holders, cold, sunlight, etc.

The resolving clue, however, came from the patient herself, when she revealed that she had recently changed her brand of lipstick to one of the popular "permanent" and "non-smearing" types. Such lipsticks contain increased amounts of dyes of the dibromfluorescein, tribromfluorescein, or tetrabromfluorescein type. What they actually do is to provide a temporary dying of the skin on the lips—a process which, for most women, is apparently harmless, but which, for an increasing number, causes a severe cheilitis.

The prescription in this case was simple—a change to AR-EX Special Formula (Non-Permanent) Lipstick. This is an especially fine lipstick for use in allergic cases because it contains no dyes, but achieves its shades by means of certified lake colors (pigments). Thus, the drying or irritating effects of the dyes are avoided.

Within two weeks, the lips had cleared completely, and the romance was saved.

THE MEDICAL DETECTIVE•

Doctor to Doctor

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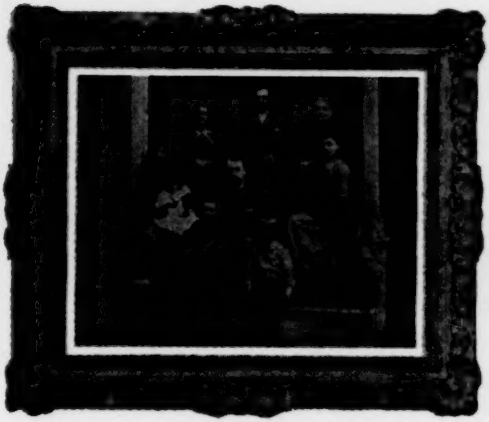
M. Paul Hudson, M.D.
Columbus, Ohio

Mail your caption to The Cartoon Editor Caption Contest No. 2 MODERN MEDICINE 84 South 10th St. Minneapolis 3, Minn.

". . . and then she said 'No'!"



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Washington Notes

Senator Tobey is determined to clear the track for the tuberculosis and cancer treatment sponsored by Dr. Robert E. Lincoln of West Medford, Mass. He is riled at the attitude of the Massachusetts Medical Society, which wants to learn more about the system before endorsement.

A total of 2,600 persons were rehabilitated by state-federal programs last year. Before rehabilitation, only 11% of the total were employed; after rehabilitation, 84%. Average earnings of those employed increased from $1,577 to $2,133.

Price of catgut sutures will go up about 7% in the next few months. However, sutures sold with medical kits don't come under the increase.

National Advisory Committee to Selective Service advises hospitals not to sign up Priority I or II men for residencies. If they do, the men are apt to be put into uniform before the year is out.

The medical-dental student deferment plan was dropped from the Universal Military Training bill by the House Committee so that the bill wouldn't look like "rich man's legislation" when it reached the

(*Continued on page 66*)

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IS THE LOGICAL FORMULA

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Mannitol hexanitrate	16 mg.[1]
Rutin	10 mg.
Phenobarbital	8 mg.

[1] This specially-designed formula permits dependable nitrite therapy with less risk of developing nitrite *tolerance*.

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All in all, you'll find Pyribenzamine Elixir (tripelennamine) an excellent choice next time a pediatric antihistaminic is indicated. In pint and gallon bottles, 30 mg. tripelennamine citrate per teaspoonful (4 cc.).

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Cytora 'Organon' is a complete medication specially formulated for the prevention and treatment of not only hypochromic anemias but also the associated nutritional deficiencies which you so frequently encounter. Each Cytora tablet contains a well-balanced combination of vitamin B_{12}, iron, folic acid, liver concentrate vitamin C, and five B-complex factors. Thus you will note that Cytora provides in a single tablet important factors—including B_{12}—utilized in erythropoiesis plus other dietary essentials so often needed by your patients with hypochromic anemia and by your patients during childhood and later life, during post-operative convalescence, and during pregnancy. Cytora is available in bottles of 100, 250, and 1000 tablets.

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floor. Otherwise, critics of the bill could claim that youths able to afford college would escape service, but poor boys would have to go.

New personnel troubles are brewing in VA's medical department. First, Dr. H. A. Press resigned as one of Dr. Joel T. Boone's top assistants. Then Dr. Edward Harvey Cushing resigned. Although Dr. Press's leaving was not routine, he issued no statement. Dr. Cushing did, indicating clearly that he and Dr. Boone weren't in agreement on some basic policies.

Salary Stabilization Board is allowing health-welfare plans negotiated by unions to be extended to salaried personnel without special approval. The board also is allowing new plans to start collecting money, pending approval of benefits schedules.

"I'll be home late, yes late. 'L' as in laparotomy, 'A' as in appendectomy, 'T' as in thoracoplasty, 'E' as in enterostomy."

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For use when sodium intake is restricted in management of the rheumatic or arthritic patient—

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1. Bull. Rheum. Dis. 1:9, 1951.
2. Am. J. M. Sci. 222:243, 1951.

Each enteric coated tablet of Pabalate-Sodium Free Persian rose color contains ammonium salicylate 0.3 Gm. 5 gr. and para-aminobenzoic acid as the potassium salt 0.3 Gm. 5 gr. bottles of 100 and 500

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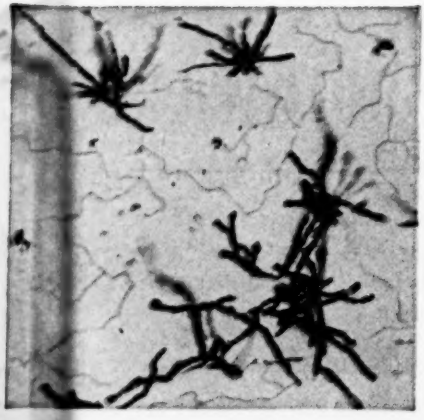

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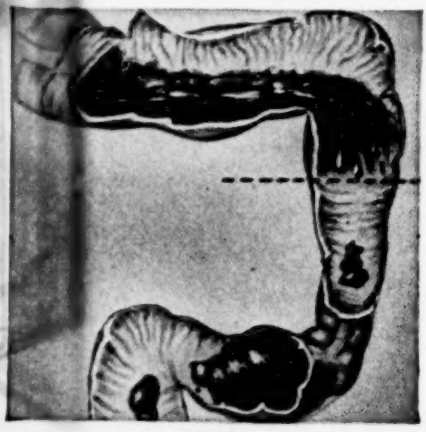
Oral streptomycin, effective against most organisms implicated in bacterial diarrhea. More rapid in action than sulfonamides. Non-toxic in therapeutically effective dosage.



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Kaolin, pectin and alumina gel act to accomplish five basic aims in control of diarrhea.

1. Bring symptomatic relief by soothing and coating inflamed and irritated mucosa.
2. Adsorb and aid in removal of bacteria, toxins and irritants.
3. Check dehydration.
4. Help restore normal absorption of fluids and nutrients.
5. Promote development of formed, comfortably passed stools.

SUGGESTED DOSAGE

Four teaspoonfuls, three or four times daily before meals. Children, according to weight and response.

Supplied: Bottles of 3 fl. oz.

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Wyeth

Tuberculosis 'Cure'

time needed for appraisal

A Modern Medicine Editorial

Many physicians are now wondering how much truth there is in all the newspaper excitement about a "new cure" for tuberculosis. They are doubtless wondering also why something so important to medicine should have been announced first to the public and not to physicians.

Fortunately when the news broke, your editor happened to be in San Francisco visiting with his old friend Dr. H. Corwin Hinshaw, the man who, with Dr. William Feldman, first tested streptomycin. Dr. Hinshaw for a month has been testing the drug, isonicotinic acid, on a lot of patients, and he also has just received the "release" from the tuberculosis society.

The story appears to be that several drug companies recently compared notes and found that they had all been concentrating on the same drug—one that has been available for a long time. They found that in the test tube it will stop the growth of tubercle bacilli. Theoretically, then, it ought to be the cure long looked for. But many things can happen when a drug is given to a sick man, and the questions are: Would the drug be useful in man? Would it be tolerated when given in sufficient dosages? Would it be safe to use?

Already it is known that the preparation is easy to take, that it hasn't caused serious toxic effects. Good results have been observed, but no rapid and miraculous cures. Isonicotinic acid seems to help men and women combat their disease. Unfortunately, the biggest group of cases, treated at the Sea View Hospital on Staten Island, have been under observation for only a

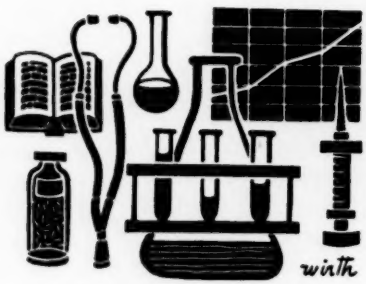
few months. This is too short a time for the appraisal of treatment for a very chronic disease.

The plan had been to publish scientific articles in several medical journals before making a public announcement. The timing was arranged for the first of April. Unfortunately the story got out prematurely through laymen. The first scientific information available for physicians will probably be in the *Quarterly Bulletin of the Sea View Hospital.*

Because the action of the drug appears to be brief, the plan today is to use it with streptomycin. It is hoped that the drug will be better than PAS, which up to now has been used with streptomycin. Already it is obvious that the drug is much more comfortable to take than is PAS, which many patients have been refusing to take. A great advantage of giving isonicotinic acid with streptomycin is that the dosage of the antibiotic can be so low that treatment can be kept up for a year and more without injury to the ears.

The new drug has to be passed on by the Food and Drug Administration before it can be prescribed by physicians everywhere. In the meantime the doctors will have to combat the idea prevalent among patients that they can now refuse collapse therapy and go right back to work. It is unfortunate that the frequent premature reports of miraculous overnight cures must make so much trouble for honorable and able physicians who refuse to be stampeded into using new and untried drugs.

WALTER C. ALVAREZ



Diabetes is satisfactorily controlled if the patient is hyperglycemic for no more than 25 to 30% of each day.

Liberal Diets for Diabetic Patients

HENRY J. JOHN, M.D.
Cleveland

DIABETES can be well controlled with a liberal diet. Such regulation eliminates the feeling of sacrifice and consequent psychologic stress, permitting greater happiness and accomplishment.

The diets of 2,000 to 2,500 calories prescribed by Henry J. John, M.D., are, for all practical purposes, normal diets. A patient can eat whatever is served the rest of the family if he does not take sugar, pastry, and soft drinks, restricts his bread to 2 slices or less a meal, omits bread if he eats potatoes, and for dessert uses fresh or canned fruit without sugar or else cheese and crackers.

The diabetic must eat with moderation and watch his weight and, if gaining, cut down on eating. Once a week a helping of ordinary ice cream without sauce helps to satisfy the craving for sweets.

Such a dietary routine is simple, and the patient no longer feels different from the rest of the family. He eats what they do but learns moderation.

The patient does not think constantly about the things he is not supposed to eat. Such thoughts create a tremendous craving for the forbidden food which sooner or later leads the patient to step over restrictions. The psychologic aspect of this is too important to disregard.

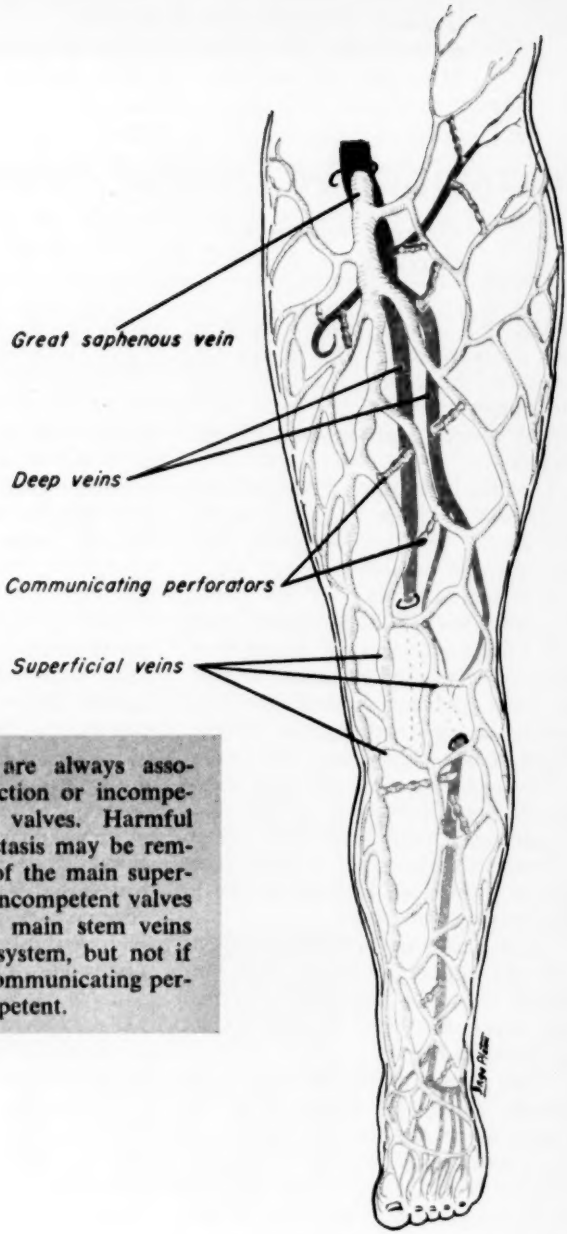
Dependence on urine examinations for control is not the ideal method whether the patient is taking insulin or is just on a diet. Evaluating any particular blood sugar level does not give specific information. The significant factor is determination of how many hours out of twenty-four the level is normal.

Even a healthy person has some postprandial hyperglycemia which is physiologic and of short duration, usually lasting one and one-half to two hours after meals, up to 25% of each twenty-four hours. This is the criterion for evaluating diabetic control.

Thus, if a diabetic is hyperglycemic 25 to 30% of each day, control is satisfactory. If the high glucose concentration lasts 50% of the day, readjustment of the insulin dosage is necessary. The practical reason for making 3 blood sugar tests a day, 1 before each meal, is to see if the blood stream is clear of excess sugar before the next meal.

During the past five years, 90% of the diabetics treated by the liberal dietary regimen have been successfully controlled; insulin dosage has been reduced or even discontinued.

Further observations on the use of liberalized diets in the treatment of diabetes. Ann. Int. Med. 35:1318-1328, 1951.



• Varicose veins are always associated with destruction or incompetence of venous valves. Harmful effects of venous stasis may be remedied by ligation of the main superficial trunk if the incompetent valves are limited to the main stem veins of the saphenous system, but not if the valves of the communicating perforators are incompetent.

Regulated pulsatile air pressure applied to the lower leg may overcome disturbances in the return of venous blood.

Air Pressure for Varicose Venous Stasis

W. J. MERLE SCOTT, M.D.
University of Rochester, N. Y.

POSTPHLEBITIC and varicose venous stasis resulting from grossly incompetent perforating veins in the leg may be corrected by wearing an air-pressure legging.

Incompetent valves in the main stem veins of the saphenous system may cause venous stasis, but the harmful effects can be remedied by high ligation of the main superficial venous trunk above all the branches. However, the stasis accruing from incompetent valves in the perforating veins and from the inflammatory reaction after femoroiliac thrombophlebitis is much more difficult to treat. Lymphedema of the leg may occur and, if the condition is unrelieved, pigmentation, subcutaneous induration, and ulceration are likely to appear.

Attempts to overcome the stasis by external compression, sclerosing venous injections, and ligation of the incompetent perforators have serious defects and many of the severe conditions continue unchecked.

In over 350 cases of stasis, W. J. Merle Scott, M.D., has used a legging of inelastic material containing an inflatable rubber bladder, which is pumped up after the legging is donned. Not only is controlled and uniform pressure applied to the skin, but the pressure rises rhythmically with each contraction of the muscles on walking. Essentially, the legging is like a substitute for the deep fascia, placed outside the skin and subcutaneous tissues, and the powerful pumping action of muscular contraction compressing the veins and pushing the blood upward against gravity is applied to the superficial veins throughout the lower part of the leg.

The rubber bladder is inflated to about 35 mm. of mercury and, when inflated, should contain an air pocket at least ½ in. wide throughout its length. The patient's application of the legging and method of inflation are checked to assure best results.

The swelling from postphlebitic or varicose stasis can be adequately controlled with the legging, but any inflammatory element must be treated before complete control can be achieved.

Hardened subcutaneous tissues and thickened corrugated skin do not benefit quickly from treatment with the pulsatile air pressure. After from six to twelve months of treatment, however, the subcutaneous induration softens, and the skin becomes smoother and more pliable. The nutrition of the limb is much improved; even the pigmentation lightens.

Postphlebitic and varicose ulcers in the lower leg are regularly healed

Postphlebitic and varicose venous stasis. J.A.M.A. 147:1195-1201, 1951.

while the patient is ambulatory. The granulating base rapidly assumes a healthy red appearance, granulations fill the concavity of the ulcer, and epithelium rapidly grows across the flat surface.

Ulcers with a hardened fibrotic base take longer to heal. If the base is directly on periosteum so that granulations cannot develop, a split-thickness graft is applied.

If infection is present, but not too virulent, the ulcer usually heals with use of the legging. For the more serious types, and quite often with fungous infections, topical treatment is necessary.

Rubber sensitivity occasionally occurs. A woven cotton bandage worn without stretch next to the skin is sufficient to correct slight sensitivity. For severe reaction, the rubber bladder must be enclosed in plastic.

Excess moisture is sometimes present, especially in conjunction with an eczematoid dermatitis. The legging increases the moisture and irritates the skin condition. A cotton bandage next to the skin will absorb the moisture; in severe cases, dilute potassium permanganate soaks or gentian violet applications are used.

Usually the damage to the valves is permanent, and venous stasis will return if the legging is discontinued. After ulcers have healed, induration has receded, and nutrition has improved, the legging may usually be left off from 10 to 25% of the time the patient is on his feet.

¶ PINWORM INFECTION may be eradicated by terramycin base, an intermediate amphoteric form, given by mouth in single daily doses for a week. No special diet or purge is used; toxic reactions are insignificant and results better than with any standard agent. At the Yaws Experimental Center, Gressier, Haiti, Elmer H. Loughlin and associates prescribe 1 gm. daily for children under 5 years old, 1.5 gm. from 5 to 10 years, and 2 gm. thereafter. All members of a family are treated simultaneously. In a series of 52 cases, no relapse was observed within five weeks after the course.

Antibiot. & Chemother. 1:588-593, 1951.

¶ PRIMARY FIBROSITIS frequently improves during vitamin E therapy, and early changes may be eliminated, apparently because the size and number of fibroblasts are reduced. An encouraging proportion of patients with Dupuytren's contracture of palmar fascia, Duplay's periarthritis of the shoulder, Peyronie's disease, and lumbago were relieved by such treatment. At the Rochester General Hospital, Rochester, N. Y., Charles LeRoy Steinberg, M.D., found the regular mixed natural tocopherols equal to fortified preparations in treatment of 46 cases. Daily doses of 50 to 300 mg. or more were given for intervals of a few weeks to many years.

Arch. Surg. 63:824-833, 1951.

Some of the abnormalities in the lungs of patients with asthma are reversible by adequate treatment.

Pulmonary Studies of Asthmatic Patients

HENRY D. BEALE, M.D., W. S. FOWLER, M.D., AND J. H. COMROE, JR., M.D.
University of Pennsylvania, Philadelphia

DURING asymptomatic periods, the pulmonary function of most asthmatic patients is abnormal.

Such persons usually have decreased vital and inspiratory capacities; increased functional respiratory capacity and residual volume, both absolutely and in relation to total capacity; slight hyperventilation; lessened maximal breathing capacity; abnormal intrapulmonary gas distribution; and slightly altered spirograms.

To maintain the lung volume and pulmonary function at normal levels between attacks may require persistent treatment even during the symptom-free interval. Pulmonary function tests offer a means of identifying those patients whose lungs are abnormal between attacks and provide an objective measure of the reversibility of the changes by therapeutic procedures.

In many cases maximal breathing capacity, vital capacity, and intrapulmonary gas distribution improve after administration of a bronchodilatory drug—subcutaneous epinephrine or epinephrine aerosol—indicating that the abnormalities are partly reversible and that many asthmatic patients have definite bronchospasms without either signs or symptoms.

Studies of 20 asthmatic patients in sympton-free intervals by Henry D. Beale, M.D., W. S. Fowler, M.D., and J. H. Comroe, Jr., M.D., show that sharp differentiation between pulmonary emphysema and asymptomatic chronic obstructive disease is very difficult to make on the basis of ordinary tests of pulmonary function. With both conditions, vital capacity and inspiratory capacity are ordinarily decreased, the residual volume is increased, the maximal breathing capacity is reduced to a greater degree than the vital capacity, and the intrapulmonary distribution of inspired gas is abnormal. In both, the arterial oxygen saturation can be reduced without significant change in the arterial plasma carbon dioxide or *p*H.

With pure, uncomplicated bronchial asthma, these changes arise from obstruction to the flow of gas, resulting in hyperinflation of the lungs at resting expiratory phase, reduced velocity of air flow, regional inequalities in gas distribution, and hypoventilation of some lung areas.

In pure emphysema, uncomplicated by obstruction, the changes occur

Pulmonary function studies in 20 asthmatic patients in the symptom-free interval. J. Allergy 23:1-10, 1952.

largely because of reduction in elasticity of the lung. The thorax can thus assume a larger volume at the resting expiratory level, the velocity of air flow is reduced, especially in expiration, because of the lack of assistance in emptying by the elastic recoil, and regional inequalities in alveolar ventilation result.

Bronchial obstruction in chronic asthma may be due to constriction of bronchiolar smooth muscle, to mucosal edema, congestion, or secretions. Therefore more persistent, thorough, and varied therapy with bronchodilators—administered systematically and by aerosol—chemotherapeutic agents, and adrenal cortical hormones may be needed to restore the normal state.

Morning Sickness in Men

IRVING A. WARREN, M.D.

A SYNDROME resembling morning sickness in pregnant women affects a considerable number of psychoneurotic men.

Symptoms apparently represent regression to a childlike response to insecurity and emotional stress.

The patient has no appetite for breakfast, and the sight of food, especially fats, is distasteful. Forcing himself to eat results in nausea, retching, and often vomiting.

Later in the morning coffee may be swallowed, and a small noon meal is eaten without pleasure but without much difficulty. A large dinner is relished, assuring fairly adequate nutrition.

In some cases, nausea returns at any time of day, usually in a disturbing situation. Distress with or without vomiting is often felt during heavy manual work and may impose a severe vocational handicap.

Other functional symptoms are fairly common. The subject is pale, tense, and nervous, complains of chronic fatigue, and may describe a knot of butterflies in his stomach. In half the cases, short bouts of diarrhea and abdominal cramps occur every few weeks or months.

No organic alimentary disease was found in 17 of 20 cases seen in a medical clinic of the Veterans Administration Regional Office, Detroit. In the remainder, gastritis, duodenal ulcer, or deformed duodenal bulb was noted.

A year or two after the first observation, Irving A. Warren, M.D., observed no change in the morning sickness of 13 of the 20 patients; 1 of the men became worse, 4 of the men improved, and 2 apparently recovered.

Morning sickness in men: a functional gastrointestinal syndrome. Gastroenterology 19:820-828, 1951.

Treatment should aim at eradicating the source of the embolus and preventing further intracardiac thrombus formation.

Embolism with Rheumatic Heart Disease

RAYMOND DALEY, M.D., THOMAS W. MATTINGLY, M.D., EDWARD F. BLAND, M.D., AND PAUL D. WHITE, M.D.
Massachusetts General Hospital, Boston

C. LAURENCE HOLT, M.D.
Maine General Hospital, Portland

ARTERIAL embolism frequently results from rheumatic heart disease.

A mitral valve lesion was found in 97% of 194 patients with rheumatic heart disease complicated by systemic embolism studied by Raymond Daley, M.D., Thomas W. Mattingly, M.D., C. Laurence Holt, M.D., Edward F. Bland, M.D., and Paul D. White, M.D.

Cerebral emboli may produce bizarre and confusing manifestations, including transient unconsciousness and motor or sensory dysfunction. Splenic, left renal, and pulmonary embolization and infarction are often hard to distinguish.

Often emboli lodge at the bifurcation of the large arteries and tend to avoid small right angle branches, such as the coronary and intercostal arteries. Embolism of small arteries, especially if multiple or repeated, closely resembles subacute bacterial endocarditis.

Most frequent and dangerous site for embolization is the central nervous system. Nearly 50% of the emboli occur in the cerebral arteries, and 49% of the patients with such lesions die.

Most dangerous site for embolization

Those who survive often have severe and crippling after effects, such as persistent motor disability, aphasia, and mental deterioration. Since emboli travel with greater facility up the right than the left carotid arteries, left hemiplegias are more common than right. A few patients make remarkably complete and rapid recoveries from what initially appears to be a severe cerebral involvement.

No satisfactory treatment of cerebral embolism exists. Results of blockage of the stellate ganglion are equivocal. Anticoagulant therapy is considered too risky.

Embolization to the aorta and branches, particularly the bifurcation, has a serious prognosis. If embolectomy is performed within eight

Systemic arterial embolism in rheumatic heart disease. Am. Heart J. 42:566-581, 1951.

hours, chronic ischemia may be greatly minimized. Additional emboli should be searched for in the femoral and iliac arteries. Anticoagulant therapy can do much to reduce distal propagating thrombi. Embolectomy is often lifesaving in cases of brachial or axillary embolization.

If surgery is impractical when emboli involve the arteries of the upper or lower extremities, upper thoracic or lumbar sympathectomy is done. Anticoagulants are not used concurrently with these conservative measures, because extensive hemorrhages and hematomas may have serious consequences.

Atrial fibrillation occurred in 90% of the cases. Auricular flutter was rarely observed. In most cases, embolic episodes happened during chronic atrial fibrillation in patients receiving maintenance therapy with digitalis. Possible relationship of embolism to quinidine administration was noted in only 1 case. No evident relationship existed between the incidence of emboli and the state of physical activity, duration of heart failure, position of the body, or effect of surgical procedures. In fact, most emboli occurred when the patients were asleep or physically inactive.

An associated moderate enlargement of the heart was noted, mainly of the left atrium. Most atrial thrombi were situated on the posterior wall, just above the mitral valve. Embolism is uncommon with giant left atrium.

Once a patient has had an embolic episode, the aim of therapy should be to eradicate the source of the embolus and to prevent further cardiac thrombus formation. Amputation or ligation of the left atrial appendage seems inadvisable, since examinations revealed that the appendage contained a thrombus in only about 25% of such cases.

Since atrial fibrillation appears in most patients with intraatrial thrombi associated with embolic episodes, attempts have been made to restore and maintain normal sinus rhythm with quinidine sulfate. Such conversion is not always possible in advanced mitral stenosis and frequent changes in rhythm may favor the liberation of emboli in a heart that contains intracardiac thrombi.

Results with long-term anticoagulant treatment to prevent recurrent intracardiac thrombus formation are encouraging. Apparently such dosage must be continued indefinitely. Danger of major hemorrhagic episodes are always present and considerable study and observations are necessary to determine whether such long use justifies the risk and expense involved.

Any medication which may decrease coagulation time must be avoided. The effect of such drugs as digitalis, mercurials, and methyl xanthines results from the induction of diuresis and the production of hemoconcentration. Without diuresis, blood coagulation remains unchanged.

More radical forms of therapy may be used to control or modify the combination of mitral valvular disease and atrial fibrillation which predisposes to intracardiac thrombus formation. Commissurotomy in conjunction with anticoagulant and quinidine therapy has been tried.

An initial period of hospitalization gives the patient an opportunity to learn how to live with his ulcer.

Educating the Peptic Ulcer Patient

ALLEN E. HUSSAR, M.D.
Veterans Administration Hospital, Tuscaloosa, Ala.

A PEPTIC ulcer may be healed, but doesn't always remain healed. Indoctrination of the patient in the principles of an ulcer life is most important for preventing recurrences.

Allen E. Hussar, M.D., believes that an initial period of hospitalization is assurance of successful management of peptic ulcer. This interim gives the physician ample time to teach the details of an ulcer life and helps the patient to understand the instructions, since these are usually demonstrated by treatment in the hospital.

The patient should be persuaded that by accepting certain restrictions he may expect to be free of trouble for the rest of his life or to have symptoms only infrequently and for short periods. He is warned that the consequences of negligence are frequent recurrences causing misery, complications, disability, and possibly death.

The patient is taught that the purpose of dietary treatment is to protect the stomach and duodenum from chemical, mechanical, and thermal irritations and to neutralize the acid gastric secretions. This can be accomplished with a bland diet, providing the patient is told when and how to eat. Meals should not be large or hurriedly eaten, nothing extremely hot or cold should be swallowed, and no stressful subjects should be discussed when the patient is eating.

In addition to the three main meals, the patient should never let more than two hours pass when awake without neutralization. Between-meal feedings may consist of a small meal, a glass of milk, a few crackers, or antacid tablets.

Cigarets, alcohol, coffee, tea, and carbonated drinks must be given up. After a long symptom-free period, a well-diluted glass of whisky with or after a meal may be permitted. Similarly, after a year without symptoms, ½ cup of weak coffee or tea with cream is allowed.

Drugs which are required for treatment of concomitant disease should be those that will cause least irritation to the stomach and should be taken after meals. The patient must be warned against taking any medication not ordered by the doctor.

Physical and emotional stress must be avoided. The patient with a job requiring vigorous physical work should change occupations if possible. Ulcer patients should get at least eight hours of sleep, find time for relaxation and hobbies, but refrain from competitive sports.

Educating the peptic ulcer patient. GP 5:35-38, 1952.

The patient must understand that adjustment of emotional disturbances will contribute substantially to the successful management of the disease. Separation from a nagging relative or adjustment of unsettled love, family, or financial affairs may often be accomplished when the patient understands the effect of these circumstances upon his physical condition.

To prevent recurrence under unavoidable stress, the patient must take additional precautionary measures, including shortening the period between neutralizations to one hour and taking phenobarbital with atropine four times daily.

The patient should always call the doctor when symptoms recur, but the most important part of the treatment of recurrences is rest.

Treatment of Belching

MARTIN L. TRACEY, M.D.

PATIENTS frequently consult a physician because of belching. Convincing the patient that the act is voluntary and can be stopped at will is often more effective than diet and medication.

Martin L. Tracey, M.D., of the Lahey Clinic, Boston, does a complete gastrointestinal examination, even if no other symptoms exist. An organic cause may or may not be found.

The habit of belching is often started by sensations resembling gas pains. In hope of relief, the affected person soon teaches himself to swallow and expel air. Particularly in nervous people, constant regurgitation of air may irritate the cardia of the stomach or the esophagus, perpetuating the reaction in a vicious circle.

Belching may result from eating too fast or too much, especially if food is improperly chewed. At a dinner party, excitement produces pylorospasm, and the air forced down with food pops up. Since more air enters with a slouching position, the head and body should be kept erect at meals.

Occasionally air is simply sucked into and out of the gullet with an audible sound. In other cases, a bubble remains in the stomach or passes into the colon, causing bloating and cramps.

Sensations that induce belching may be removed by antacids, antispasmodic medication, a sip of hot water, or swallowing saliva with the head erect.

The skeptic should be told that belching is impossible without preliminary swallowing, which is difficult with the mouth open. To demonstrate this he is asked to try to belch while holding a cork between his teeth or grasping the larynx.

Clinical observations on belching and its treatment. Lahey Clin. Bull. 7:155-156, 1951.

Use of heparin or dicumarol requires individualization of dosage based on results of tests of coagulation effects.

Anticoagulant Therapy

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PREVENTION of thrombosis is the sole purpose of anticoagulant treatment, since thrombi and emboli already formed are unaffected by these drugs.

With carefully supervised anticoagulant dosage, the incidence of postoperative and postpartum thromboembolic complications is greatly reduced. Agents inhibiting blood coagulation are useful prophylactically also after acute myocardial infarction or acute arterial occlusion, immediately after a thrombotic episode in patients with chronic occlusive arterial disease, in cases of idiopathic recurrent thrombophlebitis, and to prevent thromboembolism during congestive heart failure, polycythemia vera, and inoperable carcinoma.

The choice of anticoagulant is dictated by individual circumstances. Heparin is recommended if the patient has definite hepatic or renal insufficiency or if reliable Quick prothrombin time tests are not available.

Dicumarol is preferred for long-term therapy and when the risk of thromboembolic complications is increased but no recent acute thromboembolic episodes have occurred. With acute peripheral thrombosis or embolism, heparin and dicumarol are both used, the former being discontinued when the prothrombin time reaches the therapeutic range.

If *heparin* is used, a coagulation time at least twice normal is generally considered adequate to inhibit intravascular thrombosis. Disadvantages of the agent are cost and difficulty of administration. Continuous intravenous administration of heparin requires frequent tests of the coagulation time and careful supervision. The Swedish method of giving a fixed dose of heparin at stated intervals ignores differences in heparin tolerance among different individuals and permits frequent lapses in measurable anticoagulant effect.

The intramuscular or deep subcutaneous injection of heparin in a slowly absorbed medium is a simple way of inducing an anticoagulant response lasting several hours. The heparin action can be stopped quickly if desired by applying an ice bag to the site of injection and giving protamine intravenously.

The initial trial dose of heparin is 200 mg. The coagulation time is measured one to four hours and twelve hours later to note the intensity and duration of heparin action and to serve as a guide for the amount and frequency of subsequent doses. Coagulation times are noted at similar intervals every few days

Anticoagulant therapy in peripheral vascular disease. Circulation 4:613-624, 1951.

after an injection so that dosage may be varied as necessary.

Dicumarol is cheap and easily administered, but an adequate effect is not obtained for one or more days after the initial dose. Moreover, effects do not subside for several days after discontinuance.

The aim of dicumarol treatment is to produce and maintain a moderate but not excessive deficiency of prothrombin activity. Dosage must be individualized on the basis of each patient's reaction to fixed amounts.

Prothrombin time tests are performed at least daily for successful therapy. For the most part prothrombin activity between 10 and 30% of normal or prothrombin time between 2 and 2½ times normal expressed in seconds is considered optimal.

Nelson W. Barker, M.D., suggests the following scheme to avoid confusion in attempting to express prothrombin deficiency in terms of percentages of prothrombin activity:

Each time a new batch of thromboplastin is prepared T^{30}, T^{20}, and T^{10} are determined. T^{30} is the average prothrombin time, in seconds, of 3 normal persons' 30% plasma in 0.9% sodium chloride solution. T^{20} and T^{10} are the prothrombin times, respectively, of 20 and 10% plasma, similarly diluted.

On the first day, 300 mg. of dicumarol is given, and subsequent doses are varied to maintain the patient's prothrombin time between T^{30} and T^{10}. When the prothrombin time is greater than T^{10} on two successive days, 30 mg. of menadione bisulfite is given intravenously.

Contraindications to the use of dicumarol include renal insufficiency, hepatic insufficiency, purpuric states, and recent operations on the brain and spinal cord. A reduced dosage of dicumarol is advisable for patients who are hypersensitive to dicumarol or who have potential bleeding lesions or drainage tubes in wounds or body cavities.

Bleeding constitutes the only important untoward effect from dicumarol. To reduce an excessively elevated prothrombin time into the therapeutic range, water-soluble preparations of synthetic vitamin K, as menadione bisulfite, are adequate. To lower the prothrombin time as rapidly as possible, 500 mg. of vitamin K_1 or K_1 oxide orally or intravenously is preferable.

New compounds, including Tromexan, anticoagulant No. 63, Phenylindanedione, and Paritol, are currently being investigated in attempts to overcome deficiencies in existing anticoagulant treatment.

¶ PAINFUL STONE BRUISE occurs when the heel strikes a hard object with sufficient force to rupture small blood vessels. The injury, common among athletes, is not serious but is disabling. Pain arises from collection of blood under pressure next to the bone. Weston Cook, M.D., of Columbia, S. C., finds that relief is prompt when novocain is applied to the skin and the collected blood removed with a large bone needle.

J. South Carolina M.A. 67:324-326, 1951.

Distinguishing between true and false thoracic pain helps in diagnosis of coronary artery disease and may prevent unnecessary invalidism.

Chest Pain with Coronary Artery Disease

ROBERT L. MC MILLAN, M.D.
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THE most common serious cause of pain in the chest is disease of the coronary arteries. Yet many organic and inorganic disturbances of function also produce thoracic pain.

A correct differentiation between chest pain due to coronary artery disease and pain resulting from other causes is essential in diagnosis and to prevent cardiac neuroses.

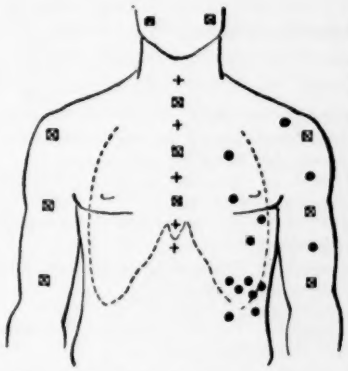
Robert L. McMillan, M.D., divides painful coronary disease into two types: [1] coronary insufficiency resulting in angina pectoris, and [2] coronary occlusion which usually produces myocardial infarction. Manifestations of the two conditions are given in the table.

Patients with angina pectoris should be treated as ambulatory unless the pain is severe enough to prevent physical activity. Those with myocardial infarction should be hospitalized immediately and given anticoagulant therapy.

True pain of coronary artery disease is commonly felt in the midline, anywhere from the navel to the nose, and is usually substernal (see illustration). The pain is often localized but may extend to either or both arms.

Substernal pain extending only to the right arm frequently indicates coronary disease; substernal pain also felt in both arms is almost pathognomonic of coronary disease.

A similar pattern may be produced by tumor of the upper thoracic or cervical spine or by compression of the spinal cord from fracture,



● Areas in which pain is proved to be "false."
+ Areas in which pain may be due to coronary disease but which must be further studied.
■ Areas in which pain frankly indicates coronary artery disease.

True and false pain areas

bone destruction, or a displaced intervertebral disk. These disorders are usually associated with demonstrable neurologic changes, whereas no demonstrable sensory changes are produced by coronary artery disease.

When midline pain—usually substernal but occasionally epigastric—radiates to the jaws, shoulders, up-

Pains in the chest—"true or false." North Carolina M. J. 13:9-11, 1952.

per arms, forearms, elbows, or wrists on both sides, disease of the coronary arteries is almost always the source. Reproducibility, repetition, and constancy of the pain pattern are characteristic of angina pectoris.

False chest pain, that is, pain unrelated to coronary disease, is not reproducible, often occurs at night, has no consistent pattern, and is almost invariably associated with an anxiety state (see illustration). Such pain can usually be relieved by reassurance and administration of a soporific and an antispasmodic.

Many false pains are due to spasms of or gas in the colon, stomach, or duodenum. Chest pain in women under 50 without hypertension is seldom from coronary disease.

DIFFERENTIATION OF ANGINA PECTORIS AND MYOCARDIAL INFARCTION

Symptoms & Findings	*Angina Pectoris*	*Myocardial Infarction*
Location of pain	Midline	Midline
Type of pain	Dull, oppressive, squeezing, aching, burning, slight	Sharp, crushing, often remitting, severe
Radiation of pain	Shoulder, left arm, neck, often to both arms, occasionally to one or both elbows or wrists	Same
Duration of pain	Minutes	Hours
Time from onset to request for medical aid	Months	Hours or minutes
History of similar pain	Frequent	Rare
Relation to exercise	Produced by effort	Exaggerated by effort
Effect of rest or nitroglycerin	Commonly gives relief	No effect
Relation to overeating or emotional disturbance	Common	Rare
Nausea and vomiting	Rare	Common
Dyspnea	Frequent but temporary	Almost constant and of long duration
Sweating	Occasionally	Almost always
Shock or collapse	Rare	Common
Blood pressure	Normal or elevated	Often low, but may be increased for several hours after the attack
Pericardial friction rub	Never	Frequently present on second and third days
Diastolic gallop rhythm	Rare	Frequently present for two or three days
Pulmonary congestion	Rare	Common
Fever	None	Almost always on second to fifth days
Leukocytosis	None	Common
Elevated sedimentation rate	None	Almost constant
Electrocardiographic changes	Transient, slight, fixed, or absent	Progressive in serial records; rarely absent
Reproducibility of symptoms	Always reproducible	Never reproducible

Diagnosis of beriberi heart disease may be hard to determine because of similarity to arteriosclerotic cardiac disease.

Cardiac Beriberi Resembling Arterial Disease

PAUL SCHLESINGER, M.D., AND
AARON BURLAMAQUI BENCHIMOL, M.D.
National Faculty of Medicine, Rio de Janeiro

IF beriberi is prolonged, myocardial edema may produce a degenerative state like that of coronary, hypertensive, or other cardiovascular disease.

Differentiation is not easy, because both types of disorder result in left heart failure, and the symptoms and electrocardiographic changes are similar.

Notwithstanding occasional lack of some typical manifestations, the over-all picture is often sufficiently plain, conclude Paul Schlesinger, M.D., and Aaron Burlamaqui Benchimol, M.D. Beriberi heart disease is likely when a hyperkinetic condition is associated with congestive heart failure, if hyperthyroidism and anemia are excluded. Since the circulation is not always rapid, however, diagnosis is based on four fundamental factors: chronic alcoholism; other evidence of vitamin deficiency, such as peripheral polyneuritis; absence of other obvious cardiac factors; and the favorable influence of rest and thiamin medication.

Only the stage of interstitial hydrops can be reversed; advanced myocardial fibrosis is incurable.

Several uncommon effects of cardiac beriberi appeared from time to time in a group of 21 patients.

Degenerative electrocardiographic changes, such as intraventricular conduction defects, were especially confusing. In 2 cases the heart condition was mistaken for arteriosclerosis until investigated post mortem.

The first symptom may be vague precordial pain interfering with normal activities. Shortness of breath on effort develops, followed by paroxysmal nocturnal dyspnea progressing to orthopnea, and cyanosis with generalized edema.

Another case may start with sudden intense dyspnea and palpitation but no precordial pain. The condition may become worse in spite of temporary improvement during a course of treatment with digitalis and diuretics.

Electrocardiograms may demonstrate left ventricular hypertrophy and myocardial damage. For example, bifid P waves may appear in lead II, biphasic P waves in leads V_1 and V_2, with left axis deviation and slurred QRS complexes. T waves are flattened in leads I and V_L and inverted in lead V_6, where R waves are tall and have a late intrinsic deflection.

In an exceptional case, advanced congestive failure may be associated with left bundle branch block. Fluo-

Cardiac beriberi simulating arteriosclerotic heart disease. Am. Heart J. 42:801-808, 1951.

roscopic examination shows great increase in heart size and bilateral pleural effusion. The electrocardiogram may show sinus tachycardia, right axis deviation, and occasional ventricular premature beats.

Autopsy reveals dilated heart chambers, and possibly thrombi in the right auricle, but the coronaries are patent and the valves smooth and flexible.

Microscopically, myocardial fibers are dissociated by classic interstitial edema, with some hyaline degeneration. Proliferation is observed, especially in vascular and subendocardial regions, and papillary muscles are fibrotic.

Detection of Occult Blood in Feces

ANN PERANIO AND MAURICE BRUGER, M.D.

FINDING traces of blood in stools is a simple, rapid method of screening for gastrointestinal cancer.

Sensitivity of several common reagents was determined by Ann Peranio and Maurice Bruger, M.D., at New York University, New York City. Subjects were ward patients and healthy medical technicians.

Orthotolidin is the most sensitive indicator, followed by benzidine, phenolphthalein, and guaiac in the order listed. The first often gives false positive results, however, and benzidine may be oversensitive unless the quantity is limited. The diet should include no meat or fish for seventy-two hours before an orthotolidin, benzidine, or phenolphthalein test. With guaiac, diet does not need to be restricted.

Healthy subjects on a meat-free, fish-free regimen can produce positive reactions only by swallowing blood before the test. Amounts required are 1 cc. of blood before the orthotolidin test, 3.5 cc. before the benzidine or phenolphthalein test, and 20 cc. before the guaiac test. With unregulated diet, 2 to 3 cc. of blood will give a faintly positive guaiac test.

Results are not altered by slight bleeding from the gums after use of a toothbrush or by food containing chlorophyll. Ferrous sulfate may possibly affect orthotolidin, but not the other reagents.

False positive reactions or color interference may be caused by copper sulfate, ferrous chloride, potassium permanganate, potassium iodide, sodium nitroferricyanide, colloidal iron, mercuric chloride, or pus added directly to reagents.

The indicators are not suitable for occult blood in urine, since urine inhibits the chemical reactions.

The detection of occult blood in feces including observation on the ingestion of iron and whole blood. J. Lab. & Clin. Med. 38:433-445, 1951.

Likelihood of coccidioidal infection should be verified by skin and serologic tests; the latter are used if dissemination is suspected.

Diagnosis of Pulmonary Coccidioidomycosis

CHARLES E. SMITH, M.D.
University of California, Berkeley

WHEN pulmonary infection with *Coccidioides* is a possibility because of symptomatic and epidemiologic history, proof depends upon laboratory evidence.

About 40% of naturally acquired coccidioidal infections are accompanied by pleurisy, fever, malaise, cough, anorexia, backache, and night sweats. Occasionally toxic erythema is also present. Some patients, usually females, have erythema nodosum or erythema multiforme, often associated with arthralgia.

Although dissemination ordinarily occurs within a few months of the primary infection, a pulmonary lesion may not have appeared or may have regressed enough to be no longer visible on chest roentgenograms. Dark-skinned males are the most susceptible to dissemination.

Cavitations, when present, are mostly cystlike and silent. Hemoptysis frequently is associated with cavitation, but the lesions rarely progress and the condition is not comparable to tuberculous cavitation or pulmonary coccidioidomycosis.

If the patient has lived or even traveled by train through a known endemic area, the possibility of *Coccidioides* infection must be considered. Since the incubation period is seven to twenty-eight days, generally ten to sixteen, the time of coccidioidal infection may often be determined quite accurately.

The first procedure in diagnosis is a skin test. A 1:100 dilution of coccidioidin is injected intradermally and the result observed at twenty-four and forty-eight hours. Induration greater than 5 mm. in diameter constitutes a positive reaction.

Intradermal injection does not activate old quiescent infection, nor is the material antigenic. The only significant systemic complication which may occur is exacerbation or precipitation of erythema nodosum or multiforme with a primary infection.

The significance of the results of the coccidioidin test is comparable to that of the tuberculin test. The response is diagnostic only when an initial negative result early in infection is followed later by a positive reaction. Except when dissemination occurs, the reaction is invariably positive by the fourth week and generally persists for many years. Dermal sensitivity in individuals with dissemination denotes a more favorable prognosis than anergy.

At times, cross reactions are noted with other mycotic antigens, notably haplosporangin, histoplasmin, and blastomycin.

If coccidioidin sensitivity has been

Diagnosis of pulmonary coccidioidal infections. California Med. 75:385-391, 1951.

demonstrated or if results of the test are negative but the patient is believed to have the disseminated condition or has a very thin-walled nonreactive cavity and has been in an endemic region, serologic tests are indicated, according to Charles E. Smith, M.D.

Diagnostic humoral antibodies develop more slowly than dermal sensitivity. However, the results of repeated precipitin and complement-fixation tests are positive in over 90% of the cases severe enough to require hospitalization, for almost every patient with dissemination, and for over half of persons with pulmonary cavitation. The effects are seldom positive with asymptomatic pulmonary residuals.

Generally, the titer of complement fixation correlates with the severity of the coccidioidal infection. Negative results of serologic tests do not eliminate *Coccidioides* as the cause of a residual pulmonary lesion with or without cavitation, but progressive coccidioidal pulmonary disease can usually be excluded if the results are negative.

Irrefutable proof of coccidioidal infection is obtained by demonstration of *Coccidioides* in the sputum. The greatest objection to sputum cultures is the hazard of laboratory infection.

A pronounced eosinophilia and early polymorphonuclear leukocytosis succeeded by lymphocytosis are some of the hematologic findings of the acute phase of the disease. An elevated sedimentation rate becomes normal with recovery. Leukocyte counts and sedimentation rates are unchanged, ordinarily, for patients with coccidioidal cavities.

RAGWEED HAY FEVER may justifiably be treated with oral cortisone and hyposensitization when patients with severe symptoms are not benefited by usual therapeutic measures and can be observed for reactions. Cortisone therapy of 25 patients studied by Emanuel Schwartz, M.D., and associates of the Long Island College Hospital and State University, New York City, resulted in great relief of symptoms for 21. The patients had not been helped by hyposensitization alone or combined with antihistamines. The therapeutic dose is 25 mg. orally four times daily during the height of the pollen season, plus weekly injections of ragweed extract. All patients should be given low-sodium diets and receive 15 drops of a saturated solution of potassium iodide three times daily as precautionary measures. In 1 case the dose was successfully increased to 200 mg. of cortisone daily when 100 mg. had been unavailing. Side reactions were observed in 10 cases; only 1 reaction was severe enough to warrant interruption of therapy. The treatment should not be employed if the patient has hypertension, coronary artery disease, congestive heart failure, hemorrhagic tendencies, peptic ulcer, diabetes, or a psychopathic personality or is pregnant.

J. Allergy 23:32-38, 1952.

Evidence is presented that terramycin is effective either alone or as combined treatment for three serious infections.

Typhoid, Typhus, and Amebic Dysentery

JOHN H. KILLOUGH, M.D., AND GORDON B. MAGILL, M.D.
U. S. Naval Medical Research Unit No. 3, Cairo

PATIENTS with epidemic typhus may be cured by treatment with terramycin.

The drug is useful in cases of acute amebic dysentery. Contrary to early reports, terramycin also benefits some patients with typhoid, find John H. Killough, M.D., and Gordon B. Magill, M.D.

TYPHOID

Terramycin was given to 5 patients with typhoid. All were acutely ill and febrile and had been sick from six to eleven days. *Salmonella typhosa* was isolated from the blood in all 5 cases and the feces in 3.

For most of the patients, treatment was started with 75 mg. of terramycin per kilogram of body weight daily. This dose was usually increased later to 100 or 125 mg.

Effects after the institution of terramycin were variable. Only 3 patients became afebrile within an average of four and one-half days after initiation of treatment. Fever did not disappear in another case until after more than two weeks of terramycin therapy. The other patient did not seem to be helped by terramycin and so was given chloramphenicol, with good response in three days.

All 4 patients who received terramycin alone were observed for three to five weeks after completion of dosage. Urine and stool cultures remained negative and no relapses were noted. The patient given both terramycin and chloramphenicol was excreting *S. typhosa* in the feces two months after the treatment had been completed.

TYPHUS

For all of 5 patients with typhus, the response to treatment with terramycin was excellent. Usually, about 22 gm. of terramycin was administered in five days. Dosage was 75 mg. per kilogram of body weight daily. Subjective and objective improvement occurred within twenty-four hours. Fever disappeared in 4 cases within three days. The fifth patient, moribund upon admission, became afebrile by the sixth day.

The results compare favorably with reports of therapy with chloramphenicol or aureomycin.

AMEBIC DYSENTERY

Terramycin was given to 7 patients with amebic dysentery; dosage averaged 66 gm. over a two-week period. The amount administered for the first three days was 150 mg. per kilogram daily, after which a reduction to 75 mg. per kilogram for eleven days was made.

Terramycin in epidemic typhus, amebic dysentery, and typhoid. J.A.M.A. 147:1737-1740, 1951.

In all cases, bloody diarrhea, tenesmus, and other dysenteric symptoms disappeared within two to six days. Stools and proctoscopic specimens became negative for amebae after two days for 4 of the patients and after four to eight days for the others.

In 5 cases, observations have been continued for three to five months. The parasite has reappeared in 2 cases. In 1 of these latter cases, the dysenteric symptoms have also recurred.

Hepatitis, present in all cases, disappeared slowly. A hepatic abscess which appeared during terramycin therapy resolved after administration of chloroquine, indicating that the combined use of chloroquine and terramycin may prove the most efficacious way to combat both the hepatic and the dysenteric phases of the disease.

The Sedimentation Rate in Cortisone Therapy

ARTHUR W. BAGNALL, M.D.

WHEN given orally, cortisone frequently causes a drop in erythrocyte sedimentation rate (ESR), even before a clinical response is evident. The fall may give the physician a false sense of security.

When the drug is administered intramuscularly, the ESR drop may be so long delayed as to suggest ineffectiveness of the medication.

In only about one-third of 50 patients receiving cortisone, most of whom had active rheumatoid arthritis, did Arthur W. Bagnall, M.D., of the Shangnessy Hospital, Vancouver, B. C., note a decrease in ESR that paralleled subjective and objective manifestations of improvement. With daily doses of 100 mg. of cortisone administered intramuscularly, clinical improvement tends to precede, sometimes by several weeks, the fall in the ESR. Clinical improvement usually is slightly more rapid with oral than with intramuscular administration.

The effect of oral cortisone on the ESR may result from the suppressive effect of the drug on the formation of fibrinogen in the liver. In rheumatic diseases, the ESR is closely correlated with the blood fibrinogen level and is more directly affected by medication which must be concentrated in the liver upon absorption from the gut.

Occasionally, patients react unfavorably to cortisone. This rare adverse response starts early with parenteral cortisone and is accompanied by a parallel rise in the ESR. Subsequent oral therapy may be surprisingly beneficial.

Paradoxical behaviour of the erythrocyte sedimentation rate in cortisone therapy. Canad. M. A. J. 65:125-127, 1951.

The axiom to the effect that no therapy is satisfactory when the pulse is absent is refuted by intraarterial transfusion.

Intraarterial Blood Transfusion

CHARLES S. WHITE, M.D., AND DONALD STUBBS, M.D.
Doctors Hospital, Washington, D. C.

ARREST of hemorrhage and restoration of blood circulation have priority in all surgical emergencies.

In most cases, administration of blood and plasma by the intravenous route is adequate. Exceptionally rapid and profuse hemorrhage, however, requires more rapid and physiologic replacement, state Charles S. White, M.D., and Donald Stubbs, M.D. The procedure should not be delayed until the brain is irreparably damaged.

Intraarterial transfusion is a safe, practical, swift means of elevating blood pressure, restoring circulation, and augmenting cardiac action after acute exsanguination. As blood enters the aorta from the site of transfusion, whether radial or femoral, all branches of the aorta are rapidly filled and blood reaches the carotid and vertebral arteries, stimulating respiration. Myocardial ischemia is relieved as coronary arteries fill.

General improvement with restoration of pulse and blood pressure is repeatedly seen in a remarkably short time; surgical measures can then be done not only to control hemorrhage but to permit a curative operation.

Indications for intraarterial transfusion are:

1] Severe hypotension from hemorrhage

2] Failure or ineffectiveness of intravenous transfusion

3] Right-sided cardiac failure, as in pulmonary congestion or coronary occlusion

4] Some arterial or cardiac surgical procedures, such as operations for coarctation of aorta.

A well-equipped setup includes a small, double-bladed, self-retaining retractor; small scalpel and bistoury blade; narrow blunt hook; a needle threaded with silk; hemostats; scissors; pick-up forceps; gauze sponges; and cannulas of various sizes.

The transfusion is given at the bedside or in the operating room. The radial artery is usually used, but if the abdomen is open, the femoral artery or aorta is available.

Using local anesthesia, if necessary, a longitudinal incision is made over the artery at the wrist. Pulsation is not always felt but the vessel can be recognized by position. The vessel is elevated and a 2-mm. opening is made in the longitudinal axis. A No. 15 blunt-ended transfusion needle is inserted; the position is fixed by a silk suture around the artery. With the needle tied in place, the skin is closed with several interrupted silk sutures.

The blood is introduced by either gravity or pressure. If the donor bot-

Intra-arterial transfusion of blood. J. Internat. Coll. Surgeons 16:716-723, 1951.

tle is elevated 5 ft. above the patient, pressure is ample to introduce blood at an effective rate. As the patient's blood pressure rises, the rate of flow decreases.

Air can also be forced into the blood-donor bottle by a simple rubber bulb with a valve, such as is used with sphygmomanometers. A gauge can be attached to register pressure within the bottle.

Should a small quantity of blood be needed very quickly, the transfusion is injected by placing a three-way stopcock proximal to the needle and utilizing a 10- or 20-cc. syringe. Blood is drawn into the syringe from the donor bottle, the stopcock is turned, and the blood is rapidly injected.

After administration of only 100 cc. of blood, pulse and blood pressure change, but at least 500 cc. is given in all cases, the amount varying with individual requirements. Intra-arterial transfusion is continued until hemorrhage is arrested and simpler intravenous routes suffice.

When the radial artery is utilized, some cyanosis of the thumb and index finger occasionally appears and lasts a few hours after transfusion.

Intraarterial Transfusion for Cardiogenic Shock

EARL N. SILBER, M.D., BURTON D. LEVIN, M.D.,
GERALD H. BECKER, M.D., AND ROBERT C. LEVY, M.D.

HIGH mortality from shock induced by myocardial infarction may be reduced by intraarterial transfusion. The procedure has given good results in 6 of 9 cases at Michael Reese Hospital, Chicago.

Over a period of twenty to thirty minutes, 250 to 500 cc. of blood is administered by a pressure apparatus through the radial artery, cannulated to direct the infusion toward the heart. The procedure usually entails severe pain, necessitating use of morphine. Of the 9 patients with profound shock, including 6 with blood pressure of 0/0, so treated, 1 patient died during transfusion and 2 more within nine hours; 4 patients survived two to five days; and 2 others were alive and well after three months.

Since relatively small amounts of blood are required, the arterial route may be used when intravenous fluids are interdicted. Earl N. Silber, M.D., Burton D. Levin, M.D., Gerald H. Becker, M.D., and Robert C. Levy, M.D., report that intraarterial infusion has no deleterious effect even with pulmonary engorgement. Improved coronary flow tends to relieve hypoxia and restore contractile power to an undamaged myocardium. Transfusion promptly stimulates respiratory centers and, by reestablishing adequate filtration pressure, provides for rapid return of kidney function.

Treatment of shock in recent myocardial infarction by intra-arterial transfusion. J.A.M.A. 147:1626-1629, 1951.

Roentgen exposure of the hands is rarely advisable for therapy and must be carefully avoided by persons using x-ray machines.

Irradiation Dermatitis of the Hands

MICHAEL L. MASON, M.D.
Northwestern University, Chicago

THE most important aspect of irradiation dermatitis is prevention.

Few of the patients with radionecrosis of the hands have had conditions necessitating radiation. Since the skin of the hands is particularly sensitive to exposure and chronic and recurring skin diseases are rarely cured by roentgen-ray treatment, the use of irradiation in such cases is illogical. Tumors and infections of the hands are also best treated by other means.

Carelessness and disregard of known precautionary measures are all too often responsible for irradiation burns among persons who work with x-ray machines or radioactive material. Many doctors, dentists, and radiation technicians are among the patients with irradiation dermatitis.

In most instances, observes Michael L. Mason, M.D., the lesion results from repeated minimal exposures. The occasional roentgenologist, the busy general surgeon, or the general practitioner who uses a machine in his practice frequently neglects to take the required precautions. A doctor often knowingly exposes himself to irradiation during diagnostic fluoroscopy or while setting fractures or looking for foreign bodies.

Patients with chronic skin disorders are also commonly subjected to repeated small doses of irradiation. If such persons remain under the care of a single dermatologist, the danger is slight. However, another physician who has no knowledge of the patient's previous therapy is often consulted after a recurrence and additional roentgen treatment may be given.

At times, a patient's hand is injured by overexposure during a relatively short period of time, as from improperly working x-ray apparatus or during fluoroscopy. Other patients have radionecrosis from destructive irradiation. Sometimes a malignant tumor is destroyed and replaced by a dermatitis which may itself be cancerous. Finally, the use of roentgen rays for depilatory purposes or for treating infection or of deep x-rays may cause radiation dermatitis.

Pathologically, the condition resembles an acute burn. The chronic changes are, however, distinctive. The irradiation interferes with the cutaneous blood supply, making the skin dry and inelastic, and exerts a carcinogenic effect on the epithelial cells. Ulceration, chronic infection, and carcinoma may ensue.

The treatment of chronic irradiation dermatitis on the hand consists of excision of the damaged skin. When operation is done before ul-

Irradiation dermatitis of the hands. Am. Surgeon 17:1121-1131, 1951.

ceration and cancer develop, quite extensive excision may be accomplished and the resultant defects replaced by split skin grafts. Sometimes small keratotic plaques may be removed and the defect sutured.

With severe lesions about the nails, the entire nail bed may need to be removed or the finger tips amputated.

If the condition is allowed to progress, infection becomes firmly established, ulcerating and frequently malignant lesions develop.

The carcinomas which develop in cases of irradiation dermatitis are almost always the low-grade squamous cell type. Local excision is usually adequate. If the subcutaneous tissues and bone are involved, amputation of the affected part is necessary. Without palpable nodes, lymph node dissection is probably not required.

Aureomycin for Diffuse Peritonitis

ALEXANDER M. RUTENBURG, M.D., STANLEY W. JACOB, M.D., FRITZ B. SCHWEINBURG, M.D., AND JACOB FINE, M.D.

FOR treatment of general peritonitis of intestinal origin, aureomycin is remarkably effective. When repeated infusions are necessary for fulminating infections, polyvinyl tubing placed in the subclavian vein facilitates administration.

The drug is superior to penicillin for diffuse peritonitis therapy and at least as potent alone as when combined with penicillin. Regardless of exudate, both gram-negative and gram-positive organisms are affected, and bacterial resistance seldom develops.

Signs and symptoms usually disappear in two days, complications are rare, and wounds heal as fast as if no infection had occurred. Results are particularly good when contamination arises from the appendix, a perforated peptic ulcer, or gangrenous cholecystitis.

Ordinarily, 500 mg. of aureomycin hydrochloride buffered with sodium glycinate is injected intravenously twice a day in 500 cc. of isotonic saline or dextrose solution.

Fulminating infection requires 500 mg. every six to eight hours given by modified Duffy technic. Polyvinyl plastic tubing fitted with a Tuohy adapter is passed through the median basilic vein to the subclavian vein. When infection is controlled, aureomycin is administered by mouth or penicillin substituted.

Response was excellent in 47 of 59 cases observed by Alexander M. Rutenburg, M.D., Stanley W. Jacob, M.D., and Jacob Fine, M.D., of Harvard University, and Fritz B. Schweinburg, M.D., of Beth Israel Hospital, Boston.

Aureomycin in the treatment of diffuse peritonitis. New England J. Med. 246:52-54, 1952.

If dosage and indications are observed and severe dehydration treated first, potassium may be given without danger of toxicity.

Potassium Therapy of Surgical Patients

EDWIN H. ELLISON, M.D., THOMAS W. MORGAN, M.D., AND ROBERT M. ZOLLINGER, M.D.
Ohio State University, Columbus

ANY hospital in which major surgery is done should have potassium available. Preparations may be provided by the hospital pharmacy, autoclaved, and added to standard intravenous fluids.

The principal indications for potassium therapy fall into three categories, the most important being the actual demonstration of potassium deficiency. Weakness, aphonia, abdominal distention, and increased irritability, together with appropriate electrocardiographic changes, reveal the need for potassium replacement.

Continued loss of large amounts of gastrointestinal fluids by vomiting, prolonged gastrointestinal suction, drainage from intestinal fistulas, or diarrhea constitutes the second major indication. Patients who have duodenal ulcer with obstruction, paralytic ileus, or intestinal obstruction require special attention. More potassium is lost by the use of long intestinal tubes than with gastric suction.

The third indication for potassium therapy is as a prophylactic measure in elective abdominal surgery when prolonged suction may not be anticipated but the magnitude of the operative procedures may so disrupt potassium metabolism that large quantities will be lost in the urine. Administration of potassium should then be a part of the pre- and postoperative care, believe Edwin H. Ellison, M.D., Thomas W. Morgan, M.D., and Robert M. Zollinger, M.D.

The oral route should be used whenever possible. The solution employed contains 1 gm. each of potassium citrate, potassium acetate, and potassium bicarbonate dissolved in 8 cc. of water. The taste may be disguised by a flavored beverage.

The usual daily dose is 9 to 12 gm. given in divided doses of 3 gm. each. As much as 18 gm. daily may be taken safely if the patient is deficient. Similar amounts may be added to any type of tube-feeding mixture.

Prophylactic therapy is started three days before extensive gastrointestinal surgery. Oral potassium is also given in gradually diminishing quantities for two or three days after gastrointestinal suction is discontinued.

When oral administration of potassium is precluded by gastrointestinal suction, parenteral administration is used. Two different salt preparations may be employed.

Practical aspects of potassium therapy in the surgical patient. Ohio State M. J. 47:839-841, 1951.

In most instances, 2.23 gm. potassium chloride is an adequate daily maintenance dose. The salt is dissolved in 20 cc. of distilled water which is introduced into 1 liter of the selected infusion fluid. The potassium chloride may be added to the second or third liter of fluid. This amount usually maintains a normal serum potassium level in patients with gastric suction. Not less than 1,000 cc. of fluid is used as a vehicle when such an infusion is given.

If intestinal intubation has been instituted with Miller-Abbott, Cantor, or other intestinal tube, potassium loss is increased and replacement will require 2 and sometimes 3 units of the preparation, depending upon the daily volume of the suction.

The other preparation contains 6.62 gm. of sodium chloride and 2.23 gm. of potassium chloride. The salt is added to 1 liter of 5% dextrose in saline in treatment for hypopotassemia combined with severe hypochloremia.

Contraindications to potassium therapy in depleted patients are severe dehydration and poor renal function. If the patient is dehydrated, 2 or 3 liters of the appropriate fluid should be given for hydration purposes before any potassium is added; this precaution will prevent toxic serum potassium levels.

¶ ALUMINUM FOIL DRESSING is adaptable for large or small sutured wounds, is comfortable for the patient, does not adhere to the sutures, and need not be disturbed until the stitches are to be removed. At Cambridge Military Hospital, Aldershot, England, results have been uniformly good in more than 100 cases ranging from large abdominal incisions to small lacerations of limbs, declares Capt. W. F. W. Southwood, R.A.M.C. An aluminum foil strip ½ to 1 in. wide is cut 1 in. longer than the wound, placed on top of the sutures, covered with a small piece of gauze, and kept in place with a strip of Elastoplast firmly applied. The foil is nontoxic, cheap, and easy to sterilize.

Lancet 261:969, 1951.

¶ NODULAR GOITER is potentially malignant and should be explored, even when asymptomatic. For cancer, total thyroidectomy and radical neck dissection are advisable only with local extension or lymph node involvement. All other carcinomas may be removed by unilateral total lobectomy or bilateral thyroidectomy, depending on the nature and extent of lesions. At the Beth Israel Hospital and Harvard University, Boston, Louis Hermanson, M.D., S. L. Gargill, M.D., and Mark F. Lesses, M.D., employ external radiation when a first operation fails and a second is impossible.

J. Clin. Endocrinol. 12:112-129, 1952.

Procaine low spinal anesthesia has advantages in vaginal delivery, especially in cardiac conditions or upper respiratory infection.

Low Spinal Anesthesia in Vaginal Delivery

WILLIAM G. CALDWELL, M.D.
Queen of Angels Hospital, Los Angeles

MANY vaginal deliveries can be safely done with low spinal anesthesia.

With capable, well-trained administrators, the method is particularly suited to patients with heart disease or upper respiratory infection. The mother's postpartum condition is much better than with other technics, and recovery is prompt.

Spinal anesthesia was employed for 2,000 of 5,369 births occurring in fourteen months, at rates increasing from 31% to approximately 43% toward the end. No women died, and postpartum hemorrhage was not increased.

The spinal procedure is probably inadvisable for individuals with emotional instability, migraine, severe spinal deformity, hypertension, or disease of the central nervous system. Multiple pregnancy and breech presentation, sometimes listed as contraindications, cause no trouble in the routine employed by William G. Caldwell, M.D.

Analgesia is induced with combined Demerol and scopolamine in standard doses, barbiturates being avoided as a rule. In a few cases, precipitate labor leaves no time for premedication, and anesthesia must be supplemented by gas.

For a primigravida, the spinal procedure is started when the cervix is completely dilated and the station is at least plus 2. The multigravida should have 8 cm. of dilatation, similar fetal station, and vigorous regular pains.

With lateral position and knees drawn up toward the chest, the lower three-fourths of the back is prepared for injection at the fourth lumbar interspace. Local infiltration is unnecessary. A 22-gauge spinal needle is inserted into the subarachnoid space, and a little spinal fluid is withdrawn.

Enough aspirated fluid is added to 40 to 60 mg. of procaine in 10% solution to make 1 cc. The drug is injected in the interval between pains. The table is tilted feet down, and a 15° Fowler position is maintained for five or ten minutes. The eyes are protected from glare and disturbing sights with moist cotton, and sleep is encouraged.

Complete insensibility to pain results in five minutes, extends almost to the umbilicus, and lasts sixty to a hundred minutes. A 50-mg. dose of procaine allows a good hour and a half for delivery and repair.

A trained nurse-anesthetist provides oxygen by mask throughout

A review of two thousand vaginal deliveries under low spinal anesthesia. J. Kentucky State M. A. 49:479-483, 1951.

delivery. Blood pressure is determined at ten-minute intervals, and fetal heart tones are noted. Oxytocics are supplied either during delivery of the shoulders or on completion of the second stage of labor.

Intravaneous fluids and plasma should be ready for instant use. Vasopressors should also be available but are warranted only if systolic and diastolic blood pressure are near shock levels. Injection of pressor agents in the anesthetic mixture may be followed by convulsions and collapse.

Spinal anesthesia is satisfactory in almost 99% of trials. Failures include cases with a bloody tap, after which procaine is seldom advisable, and cases in which no analgesic agent was employed.

The chief disadvantage of low spinal technic is subsequent headache, felt in 9% of instances. Pain is commonly transient and may be prevented if modified Fowler position is assumed when the patient returns to bed.

The number of operative deliveries is definitely increased, and use of low forceps rises from approximately 38 to 70%. Apparently, the placenta is more likely to be retained.

Therapy of Trichomonas Vaginalis Vaginitis

LEON V. MC VAY, JR., M.D., LAREY EVANS, AND
DOUGLAS H. SPRUNT, M.D.

AUREOMYCIN applied locally is effective in treatment of women with *Trichomonas vaginalis* vaginitis.

Leon V. McVay, Jr., M.D., Larey Evans, and Douglas H. Sprunt, M.D., of the University of Tennessee and John Gaston Hospital, Memphis, report that for nonpregnant patients, 500 mg. of aureomycin hydrochloride in 2 gm. of powdered talc is sprayed evenly over the cervix, vagina, introitus, and vulva on two consecutive days and twice more on alternate days. Thereafter, the patient inserts a 250-mg. gelatin capsule deep into the vagina every other night for two weeks. Pregnant patients receive two additional insufflations and insert a 250-mg. capsule every night for two weeks.

Sexual intercourse should be avoided until therapy is completed; douching is never advisable during the period of aureomycin insufflation.

Relapse or reinfection may occur, especially during pregnancy, but re-treatment is usually successful. No apparent deleterious effects result; toxic reactions are limited to slight discomfort from pruritus, burning, or intravaginal pain.

A new method of treatment of trichomonas vaginalis vaginitis. Surg., Gynec. & Obst. 93:177-184, 1951.

In all obstetric manipulations except version, adequate analgesia may be obtained with trichlorethylene.

Trichlorethylene in Obstetrics

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Oshawa General Hospital, Oshawa, Ont.

SATISFACTORY obstetric analgesia can be produced by trichlorethylene when used both intermittently throughout labor and in combination with nitrous oxide and oxygen for delivery.

The analgesia attained without loss of consciousness is more profound and prolonged than that produced by other available agents.

Among 161 patients given trichlorethylene, R. A. Gordon, M.D., and M. Vivyan Morton, M.D., noted excellent analgesia in almost half and adequate relief of pain in over 90%. In only 5.5% did any abnormality occur in the third stage, such as excessive bleeding, manual removal of the placenta, or prolongation of the stage.

A cumulative effect from the intermittent inhalation of trilene was seen in slightly over one-fifth of the patients, as manifested by drowsiness or relaxation of inhibitions. Vomiting was not significant.

The drug has less depressant effects on the baby than other inhalational agents, especially when given over a prolonged period.

Cardiovascular disturbances are not significant. With nitrous oxide-oxygen-trilene anesthesia, extrasystoles occurred in 40.7% of patients, bradycardia in 23.4%, and tachycardia in 1.5%.

Trichlorethylene may be self-administered by the patient during the first stage of labor and up to the point of delivery. The inhaler consists of a vaporizer through which air is drawn by the patient's respiration, an expiratory check valve and blow-off valve, and a by-pass by which the proportion of air drawn through the trilene vaporizer may be adjusted. Adequate safeguards are provided.

Some of the inhalers are small enough to be held in the patient's hand. Others are clamped to the bed or a nearby table and the patient is supplied with a rubber face piece connected to the vaporizer by corrugated tubing.

When using the conventional anesthesia apparatus, the trichlorethylene is placed in the ether vaporizing bottle, and a 50:50 mixture of nitrous oxide and oxygen is employed. If breathing becomes rapid, the nitrous oxide is increased to 75% and the trichlorethylene concentration is reduced.

Trichlorethylene in obstetrical analgesia and anaesthesia. Anesthesiology 12:680-687, 1951. Research supported by grant from the National Research Council of Canada.

Trilene should not be used in a closed rebreathing system with the carbon-dioxide absorption method (soda-lime), since cranial palsies and even death might ensue from inhalation of the degradation products. Commercial unpurified trichlorethylene may produce similar ill effects.

Trichlorethylene anesthesia is satisfactory for all obstetric manipulations except versions. The drug is not suitable for the latter maneuver because the uterus is not relaxed by trichlorethylene.

Use of Digitalis in Old Age

MILTON J. RAISBECK, M.D.

TREATMENT of elderly cardiac patients may be indicated not only for obvious heart failure with dyspnea and ankle edema, but in subclinical cases, shown by fatigue, restlessness, insomnia, and persistent cough.

Rapidly acting glycosides of *Digitalis lanata* are preferred by Milton J. Raisbeck, M.D., of New York Medical College, New York City. The basic unit is a tablet containing 0.25 mg. of Digoxin or 0.5 mg. of Cedilanid. Either compound may be taken in daily doses of 3 tablets for three to five days or more, then 2 tablets or so daily until the desired result is obtained.

For massive fluid retention with fibrillation and fast ventricular rate, 4 cc. of Cedilanid solution containing 0.8 mg. is given intravenously. Treatment may be continued by mouth, or 0.2 to 0.4 mg. administered by vein every six hours.

Auricular flutter is suspected with a fixed rate of 90 or more and confirmed by graphic record. Cedilanid is given intravenously in a first dose of 1.2 mg., or by mouth every six or eight hours. When fibrillation and a slow ventricular rate develop, natural rhythm may be restored by quinidine.

For paroxysmal auricular tachycardia, 0.8 mg. of Cedilanid is injected. The attack may be stopped thirty to sixty minutes later by stimulation of the carotid sinus area. However, a total dose of 2 mg. may be necessary.

After myocardial infarction, strophanthin is very useful. Acute left ventricular failure requires initially not more than 0.125 mg. or 0.25 cc. of Strophosid. The dose may be repeated in two hours and a few hours later to a total of 0.5 mg.

Digitalis is contraindicated with partial auriculoventricular block but not with complete auriculoventricular block or intraventricular block.

The use of digitalis in the aged. Geriatrics 7:12-19, 1952.

Early temporary block of the lumbar sympathetic outflow is effective therapy for Volkmann's ischemic contracture after femur fracture.

Volkmann's Ischemia and Femoral Fracture

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Hospital for Sick Children, Toronto

AFTER fracture of the femur, Volkmann's ischemia, though uncommon, is a threatening complication. Pain in the calf is ominous, but the tibial pulse may be good and the skin color and temperature normal.

Stuart A. Thomson, M.D., and Leo J. Mahoney, M.D., report that the contracture occurred in 13 of 1,233 fractures of the femoral shaft seen during a period of seventeen years. All but 1 of 7 patients treated by high spinal anesthesia were cured. In the 1 failure, treatment was not started until twenty-four hours after onset of acute signs. Pain was the common denominator in all 13 cases.

The pain is usually in the central calf area and is a deep boring type which is difficult to control with sedatives and is not much influenced by the release of bandages. The sensation is immediately intensified by passive dorsiflexion of the foot.

Numbness is felt in the toes and foot, sometimes extending to the painful calf. This sensation is associated with a stocking type of centripetal anesthesia; the calf area remains acutely tender.

An irregular, red, raised erythematous eruption with bleb formation appears on the skin over the calf. The calf is greatly swollen. The foot is edematous and dusty pink and at first may be warmer than the other; later the pulse disappears and the foot becomes pale and cold.

Movement of the foot and toes is impaired early. In a few hours total paralysis occurs and the foot rests in a position of equinovarus.

Ordinarily, no unusual reaction is observable at the fracture site. The pathodynamics seem similar in each case. The tender muscle infarcts probably account for the calf signs with patchy erythema on the skin when pulsations are still present and when the leg and foot are gradually increasing in size. Then, as the arterial spasm becomes evident, the pulse gradually weakens and disappears and the extremity appears pale.

Vasospasm produces a gradual spreading wave throughout the venous and arterial trees distal to the knee. Release of pressure by removing bandages or cutting the deep fascial planes has no effect nor is the spasm relieved by periarterial stripping. The relative involvement of anterior and posterior compartments is about equal. In most chronic cases with progressive equinovarus deformity, no plantar flexion power exists and a highly atrophic and fibrotic calf has developed.

Volkmann's ischaemic contracture and its relationship to fracture of the femur. J. Bone & Joint Surg. 33-B:336-347, 1951.

In all 13 acute cases, the causative factor was not a local nerve lesion. Stocking anesthesia and generalized paralysis are constant features, as is the uniformly symmetric return of function after the leg has fully recovered.

The best way to prevent Volkmann's ischemic contracture after a fracture, as well as to treat the condition, is to free the pressure and achieve widespread release of vasospasm.

A long-lasting high spinal anesthetic reaching all the lumbar plexus gives effective vasospastic control but must be started within the first few hours of onset. Maintenance of blood pressure during the anesthesia is important.

Paravertebral sympathetic block is also effective but does not have the same depressor influence that a spinal injection has. Intravenous injection of tetraethylammonium chloride or procaine produces anesthesia and vasodilatation but may cause blood pressure to drop and requires more supervision. Muscle decompression with or without arterial exploration is of no value.

Transfixation of the calcaneus with a Kirschner wire for traction eliminates bandages, suspends the tender calf, and prevents equinovarus deformity.

Intertrochanteric Fractures of the Hip

JEROME J. RYAN, M.D., AND JOHN M. GOSSLEE, M.D.

INTERNAL fixation of intertrochanteric hip fractures is much safer and more effective than conservative methods.

Deaths are fewer, the number and severity of complications are reduced, and the hospital stay is shortened nearly half. Results of treatment were tabulated by Jerome J. Ryan, M.D., of Rhode Island Hospital, Providence, and John M. Gosslee, M.D., of the Foundation Hospital, New Orleans, for 213 cases observed in six years.

During the first five years, about 4 of 5 patients were treated by Russell traction. In the last year, fixation was employed in 75% of cases. Mortality fell from 24 to 16%, and 2 persons aged 92 outlived surgery.

Incidence of decubitus ulcer dropped from 31 to 21% and pneumonia from 25 to 12%. The average number of hospital days decreased from sixty-nine to thirty-seven, and the group discharged as bed patients shrank from 25 to 3%.

The most satisfactory technic for the surgery of fixation included a low segmental spinal anesthesia administered by a ureteral catheter placed intrathecally. As a rule, the Smith-Petersen nail with Thurston attachment was preferred.

Intertrochanteric fractures of the hip. Ann. Surg. 134:822-827, 1951.

For large defects, homogenous bone grafts are preferable to autogenous grafts because of the amount required.

Homogenous Bone Grafts

FRED C. REYNOLDS, M.D., DAVID R. OLIVER, M.D., AND ROBERT RAMSEY, M.D.
Washington University, St. Louis

PRESERVED bone grafts should be considered useful aids in orthopedic surgery rather than universal substitutes for autogenous material.

In general, the use of bone bank grafts should be reserved for circumstances in which autogenous bone is not feasible or advisable:

- When the available supply of autogenous bone does not fulfill the particular requirements
- When the taking of an autogenous graft has not been planned or will materially increase the hazard of the operative procedure
- When the graft might be lost because of infection
- When the bank bone is used as an internal splint and the condition does not justify the taking of an autogenous graft.

The process of fixation and replacement is definitely slower with merthiolate-preserved bone than with autogenous pieces, entailing prolonged protection and a higher percentage of failures. Probably some of the cells of the autogenous graft are capable of survival and accelerate union when host capillaries reach the graft.

The merthiolate bone bank is a very satisfactory method of preservation and more economical than conservation by freezing. In 212 operations in which homogenous grafts were used, Fred C. Reynolds, M.D., David R. Oliver, M.D., and Robert Ramsey, M.D., found no recognized case of allergic reaction nor any evidence of excess tissue reaction.

Ribs from thoracotomies and thoracoplasties and bone from clean amputations and selected autopsies are surgically debrided in the operating room and cut into convenient shapes. The bone is then placed in a sterile jar and covered with a 1:1,000 solution of aqueous merthiolate.

The jar is sealed and stored in an ordinary icebox or cabinet; the solution is changed every two weeks. The bone is briefly washed in sterile saline solution before use.

All types of bone give better results if only small or moderate quantities are used.

Homogenous grafts should never be used in the treatment of major nonunion unless autogenous bone cannot be procured. Very few such grafts unite solidly and then only after a prolonged period.

Malignant degeneration of a tumor, continued activity of a bone cyst, or infection will prevent solid

Clinical evaluation of the merthiolate bone bank and nomogenous bone grafts. J. Bone & Joint Surg. 33-A:873-883, 1951.

fusion of a homogenous bone graft.

In the modified Hibbs type of spinal fusion reinforced with bank bone, over a third failed to fuse and the incidence of wound infection was higher than when autogenous grafts were used. Differences in postoperative treatment, either bed rest or a body cast and brace, seem to have little effect on the eventual outcome.

Combining bank bone with a Smith-Petersen nail in the treatment of fresh fractures of the femoral neck may fail.

Results are good when homogenous bone grafts are used to obliterate cavities in bone created by sequestrectomy and saucerization for osteomyelitis or by local excision of benign tumors. When the defect is large, bank bone is preferable to autogenous material because of the great amount required.

Preserved grafts, in the form of intramedullary pegs or inlay grafts, do well in minor nonunion cases, such as those in the tibial malleolus or olecranon.

Bank bone may be used to augment arthrodesis of various joints with almost universal success. Many will become united without the extra bone, but at least the graft does not hinder union and does provide a form of internal splint. Homogenous grafts are rapidly incorporated with solid union in certain fresh fractures where extra bone appears useful as a splint.

¶ XYLOCAINE, a local anesthetic first made in Sweden, has low toxicity, rapid, deep, and prolonged effect, and great stability. In 2,500 skin tests, Oral B. Crawford, M.D., of Springfield, Mo., and associates noted fewer reactions than with procaine, Metycaine, cocaine, or Pontocaine. Among other uses, the drug is employed for procedures in the tuberculous chest, including bronchoscopy, thoracoplasty, and resection. A 0.5% solution is suitable for infiltration, 1 or 2% in blockade, and 2% on the surface. Xylocaine should not be confused with the procaine compound Zylcaine.

South. M. J. 44:1073-1075, 1951.

¶ PENTOTHAL REACTIONS of allergic type may develop after use of the drug for narcoanalysis but are promptly stopped by ACTH. The most common effect consists of malaise, weakness, and fever starting an hour to a day after treatment and lasting one to five days if unchecked. In other cases, skin rashes and arthritis appear, reports Frederick Lemere, M.D., William Berard, M.D., and Paul O'Hollaren, M.D., of the Shadel Sanitarium and University of Washington, Seattle. Doses of 25 to 50 mg. of ACTH followed by 25 mg. at eight-hour intervals are usually effective within twenty-four hours.

Anesthesiology 13:86-88, 1952.

Nitrous oxide analgesia should be substituted for anesthesia when possible in treating extensive burns.

Anesthesia for Extensive Burns

CHARLES R. ALLEN, M.D., AND H. C. SLOCUM, M.D.
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DURING the present world unrest, hospitals near a strategic area may be suddenly crowded by severely burned victims of bombs.

Nitrous oxide analgesia is far safer than ordinary anesthesia for surgical debridement and dressing. Even a three-hour grafting operation may require only thirty minutes of supplementary cyclopropane, according to Charles R. Allen, M.D., and H. C. Slocum, M.D.

The technic was best of several methods employed in treating 240 patients with second- and third-degree burns involving 1,400 procedures. Utilized in 780 cases, nitrous oxide was satisfactory in all but 10.

An extremely restless or manic state on entry to the hospital may result chiefly from pain, fear, or cerebral anoxia. Proper treatment depends on accurate differentiation.

For pain, morphine should be given intravenously in adult dosage not exceeding 8 to 10 mg. dissolved in 5 cc. of physiologic saline solution, in one to three minutes. If necessary, a second dose is allowed twenty minutes later.

Meanwhile, fear may become evident. From 100 to 200 mg. of Nembutal, just enough for psychic sedation, may be given slowly by vein.

Cerebral anoxia may be due to reduced volume of circulating blood or to respiratory difficulty. All extensively burned individuals should receive humidified oxygen by tent, mask, or catheter.

During the first twelve hours, 1 or 2 liters of whole blood is transfused at rates depending upon the degree of shock. Instead of drinking water, modified Haldane's solution containing 3 gm. of sodium chloride and 1.5 gm. of sodium bicarbonate per liter of distilled water is given orally in as large amounts as can be tolerated.

The mouth, nasopharynx, and larynx are examined, and any foreign material is removed. A partial blockade of inspiration may precipitate pulmonary edema. For obstructive conditions, tracheotomy should be done immediately.

Overtight bandages about the chest are loosened. When breathing is depressed, opiates and barbiturates are withheld or dosage is reduced. If lungs become edematous, oxygen is administered under positive pressure up to 6 cm. of water.

Analgesia should be established before any painful procedure is begun. Premedication usually is omitted, since the subject must be responsive.

The function of the anesthesiologist in the management of the patient with extensive burns. Anesthesiology 13:65-70, 1952.

The patient is told that he will stay awake and feel pressure but no pain. On the cart, a 4 to 6 liter per minute flow of a 75 to 25 mixture of nitrous oxide and oxygen is given for three minutes. Preferably, a to-and-fro setup is employed, with the tail of the bag partly open.

The patient is moved gently to the table when analgesia is well established. Dressings are removed, burned areas scrubbed with soap and water, eschars excised, and dressings reapplied in ten to ninety minutes.

The anesthetist talks constantly and varies the gas mixture according to the patient's response. If pain develops, nitrous oxide is increased; if cooperation fails, more oxygen is given. During long operations the nitrous oxide content is often lowered to 50%.

Before grafting, analgesia is maintained until dressings are removed and the donor and recipient areas prepared. During a pause of three minutes, enough cyclopropane is added for light surgical anesthesia.

As soon as the grafts are cut, cyclopropane is discontinued, and the analgesic phase gradually returns while grafts are placed and dressings applied.

Blood pressure, pulse rate, and respiration are surprisingly steady throughout administration of nitrous oxide. Since nausea and vomiting are rare, liquids may be taken on return to bed, meals are not interrupted, and electrolyte balance is unchanged.

Diagnosis of Scrotal Cystocele

BERNARD LEVINE, M.D.

INGUINAL bladder hernia descending into the scrotum is rare. Bernard Levine, M.D., of the Beth Israel and Fordham hospitals, New York City, has recently seen 2 patients with this unusual lesion and reviews the 30 other cases reported.

The patient with scrotal hernia ordinarily has urinary disorders including frequency, nocturia, and dysuria. A common sign is two-stage micturition in which the patient first empties the abdominal portion of the bladder then voids again with the help of manual pressure on the hernia.

Residual urines are common without prostatic enlargement. The hernia may be fluctuant and emit a flat percussion note. Pressure on the scrotal mass often provokes a desire to urinate.

Cystograms usually show a dumbbell-shaped bladder with a large segment in the scrotum and the rest in the abdomen. The bladder is usually drawn somewhat toward the side of the herniation. If the patient voids the contrast medium, the roentgenogram reveals a residual collection trapped in the herniated bladder.

Scrotal cystocele. J.A.M.A. 147:1439-1441, 1951.

Myelography should be done when multiple sclerosis is suspected, since a similar syndrome may arise from constricting cord lesions.

Multiple Sclerosis Syndrome

SAMUEL J. ROSNER, M.D.
Mother Cabrini Memorial Hospital, New York City

ANY compressing or constricting cervical or thoracic cord lesion can cause symptoms and signs similar to those of multiple sclerosis. In such cases, the condition is often much improved by laminectomy and removal of the lesion.

The triad of scanning speech, intention tremor, and nystagmus may be seen with high cervical cord lesions, states Samuel J. Rosner, M.D., probably because of pressure on the spinocerebellar and, perhaps, tectospinal tracts.

Differential diagnosis can be made by careful observation of the patient and meticulous sensory tests. Symptoms first confined to one side of the body should create suspicion of a cord lesion. The level is always closely approximated by physical signs before confirmation is possible by myelography.

Myelography is a great aid in diagnosis and should be done when a sensory level is noted, even if the results of manometric and spinal fluid protein tests are normal. Previous myelograms interpreted as normal are no deterrent to later studies if indicative signs and symptoms are observed. Cervical myelograms require careful technic, patience, and experience, and may not be diagnostic when done by an inexperienced worker.

Extradural bony or fibromatous tumors, hemangiomas, intradural gelatinous cysts, or arachnoiditis with adhesions can cause compression or constriction. These lesions are at least as numerous as the degenerative condition that is called multiple sclerosis.

Adhesive arachnoiditis is a far more common cause of cord compression than has been recognized. The condition may not completely block the dye flow on myelograms, but a stranding of the dye is suggestive. Adhesion may be local, constricting only 1 or 2 segments of the spinal cord.

At operation, the cord shows no plaque formation or thrombosis, although the color is often anemic. These manifestations apparently result from a cutting off of the blood supply by either tumor pressure or adhesions, since the cord does not pulsate when first viewed.

Lysis of the adhesions or removal of the tumor restores normal pulsation of the cord. Hemostasis should be complete at the end of the laminectomy, and the dura is not repaired.

Myelograms showed definite le-

Neurosurgical observations in the multiple sclerosis syndrome. J. Nerv. & Ment. Dis. 114:511-518, 1951.

sions in 10 of 14 patients originally diagnosed as having multiple sclerosis. The lesion was confirmed by surgery in all except 1, who refused operation. Definite improvement was noted for 7 of the 9 patients after the operation.

Healing may be rapid or slow, taking from a few weeks to three years.

In case the spinal cord is badly compressed, improvement will slow down a few months after operation, but in no instance is the patient worse than before the surgical procedure.

Cerebral Lesions with Congenital Heart Disease

MORGAN BERTHRONG, M.D.,
AND DAVID C. SABISTON, JR., M.D.

INCIDENCE of brain lesions is greatly increased in patients with congenital cardiac anomalies. Among the gravest effects of cardiac anomalies are infarct, abscess, and other cerebral lesions.

At Johns Hopkins University, Baltimore, 162 autopsy records of congenital heart disease were reviewed by Morgan Berthrong, M.D., and David C. Sabiston, Jr., M.D., for evidence of cerebral damage.

Infarction occurred in 25 of 135 consecutive cyanotic patients, with venous blood passing directly into the arterial system. In the noncyanotic group of 27, brain lesions were thrombotic in only 2 of 8 instances.

Infarcts usually develop because blood flow is clogged by great numbers of red blood cells. Headache, vertigo, and other neurologic symptoms of affected children resemble those of adults with polycythemia vera.

Although veins are more often thrombosed, arteries are also involved by any or all of three possible mechanisms: Clots may [1] arise in peripheral veins, pass through cardiac defects, and reach cerebral arteries as paradoxic emboli, [2] develop first in the cardiac chambers, or [3] form originally in the brain.

Thrombosis is more likely when the already viscous blood is further retarded by ordinary attacks of cyanosis and fainting. Most hemorrhagic infarcts occur a few hours to a few weeks after operation.

Brain abscess is solitary in most cases, which suggests that the infection spreads from the sinuses or the ears and is rarely bloodborne.

Acyanotic heart disease is often associated with coarctation of the aorta and with aneurysm and hemorrhage in the circle of Willis.

Cerebral lesions in congenital heart disease. Bull. Johns Hopkins Hosp. 89:384-406, 1951.

Generalized erythroderma should be considered lymphoblastomatous in origin until proved otherwise, especially in the aged.

Skin Manifestations of Lymphoblastoma

JEFF DAVIS, M.D.
Cornell University, New York City

ONLY syphilis is more likely than lymphoblastoma to resemble common dermatoses.

A single area of leukemic infiltration appearing as a papule, nodule, plaque, or tumor may precede other signs of involvement by many months, reports Jeff Davis, M.D. Generalized pruritus or erythroderma should be investigated, especially in old age, and every effort made to establish a diagnosis.

Blood examinations and other tests must often be done repeatedly, but a condition recognized in time may be held in abeyance for long periods.

Lymphoblastomas are now classified as tumors of the blood-forming organs and probably unicentric in origin, like other malignant growths. In the early stage, patients often feel remarkably well, unlike many with cancer. Diagnosis is particularly difficult because the types of disease may overlap and change from one to another.

Types of lesion—Local or widespread cutaneous changes may appear in all forms of leukemia during any phase, acute, chronic, or aleukemic. Only 10% are specific; the remainder are toxic or nonspecific and referred to as leukemids.

Specific lesions include papules, nodules, plaques, ulceration, and erythroderma, which affects chiefly the face, scalp, extremities, breasts, and shoulders. Biopsy generally reveals well-defined infiltration.

Nonspecific manifestations may simulate herpes zoster or hemorrhagic states with petechiae, purpura, and ulcers. Pruritus, erythroderma, exfoliation, pigmented areas, or lichenification may be observed.

Chronic lymphatic leukemia—Most cutaneous lesions are associated with this form of lymphoblastoma. Small papules may develop into nodules, plaques, and occasionally ulcerative growths. Infiltrations produce universal erythrodermia of pink or red to bluish brown, or the skin may thicken diffusely with no other change.

Myelogenous leukemia—The skin manifestations resemble those of lymphatic leukemia but are much less common. The specific eruption consists of one or more blue or brown nodules a few millimeters to several centimeters in width. Lesions are found largely on the trunk but may affect the entire body.

Monocytic leukemia—Though this type of disease is rare, the skin is occasionally involved.

Two major eruptions are [1] a superficial maculopapular type that ini-

The cutaneous manifestations of lymphoblastoma. West Virginia M. J. 47:390-393, 1951.

tially resembles syphilis and later turns slate blue, and [2] a shotty papulonodular form deep in the corium. Mucous membranes sometimes bleed, and exfoliative dermatitis is fairly common.

Hodgkin's disease—The skin is affected in 25 to 40% of cases, usually with nonspecific reactions. Pruritus often develops in the early stage, accompanied by excoriation, lichenification, and pigmentation. Alopecia, icterus, edematous swellings, urticaria, purpura, or even infiltrative erythroderma may be seen. Classic cases are marked by lymphadenitis.

Lymphosarcoma—Metastases will spread to the skin from other organs in about 1 of 20 cases. Bluish red nodules and tumors rarely develop.

Mycosis fungoides—Cutaneous alterations are the chief and often the only sign of disease. Pruritus with no other symptoms may continue for several years.

Itching, erythroderma, or exfoliative dermatitis in elderly individuals may be significant. However, the first change may resemble eczema, psoriasis, or seborrheic dermatitis. Solitary or coalescent plaques and infiltrations of varied size, shape, and color come and go or progress to bluish red ulcerating tumors, yet neoplasm may be unheralded.

Since the lesions are radiosensitive, the patient's life may be prolonged for many years by roentgen therapy.

Diagnosis—Blood tests may be done with special technics, such as the oxidase stain for cells of bone marrow origin or supravital stains for myelocytes and myeloblasts.

Skin and lymph node biopsy may reveal no pathologic change for some time and should be repeated. Mycosis fungoides is found in skin, not glands. Bone marrow biopsy is particularly helpful in obscure cases.

Radiography may show softening and fractures of bone, periosteal elevations about the joints, acute arthritic change, osteosclerosis, and osteomyelitis. Mediastinal tumors of Hodgkin's disease or lymphosarcoma may be demonstrated. Small roentgen doses are employed to differentiate the responsive lesions of mycosis fungoides.

Useful evidence of lymphoblastoma is an enlarged liver or spleen, with generalized or localized lymphadenitis.

¶ANGIOMA IN BABIES should be treated immediately, since neglected lesions may enlarge and ulcerate. In 95% of cases, radium plaques containing 5 mg. per square centimeter in tray-shaped brass filters 2 mm. thick may be applied with elastoplast. From one to four treatments of three and a half hours each are given at three-month intervals by George C. Andrews, M.D., Anthony N. Domonkos, M.D., and Charles F. Post, M.D., of Columbia University, New York City. Bulky hemangiomas are protected by 1 cm. of cork or balsa wood under the applicator, and infection is controlled by local and intramuscular penicillin.

Am. J. Roentgenol. 67:273-285, 1952.

Before resorting to destructive labyrinthotomy in cases of Ménière's disease, a conservative operation should be tried.

Surgical Treatment for Ménière's Disease

SAMUEL ROSEN, M.D.
Mount Sinai Hospital, New York City

SECTION of the chorda tympani nerve alone or of both the chorda tympani and the tympanic plexus-Jacobson's nerve is effective in relieving the symptoms of Ménière's disease, particularly tinnitus and vertigo.

Endolymphatic fluid distention of the cochlear and vestibular portions of the membranous labyrinth produces symptoms of Ménière's disease, states Samuel Rosen, M.D. When the cochlea alone is involved, the signs and symptoms are deafness, tinnitus, hyperacusis, diplacusis, and distortion of sound. If the hydropic distention spreads to the utricle, attacks of vertigo supervene. Both cochlear and vestibular portions are usually affected.

The hydrops is probably due to an imbalance of the autonomic nervous system or a sort of allergy producing a vasospastic-atonic state of the capillary loops to the endolymphatic labyrinth, with resultant fluid transudation. Impulses arising in other parts of the head, such as the tongue, teeth, and jaw joint, travel over the chorda tympani nerve and the tympanic plexus-Jacobson's nerve to cause capillary spasm and, ultimately, endolymphatic hydrops. Section of the nerves breaks this stream of impulses.

Radical destructive labyrinthotomy is eminently successful in eliminating the vertigo, but much less successful in banishing the tinnitus and severe sense of pressure and fullness in and about the ear and head. Hearing is nearly always totally destroyed after labyrinthotomy, and sinc the disease becomes bilateral in 10% of cases, a definite risk is involved. The ideal surgical procedure would eliminate the vertigo and preserve the hearing.

Section of the chorda tympani and the tympanic plexus-Jacobson's nerve is performed through an ear speculum in the external auditory canal.

Local novocain anesthesia with adrenalin is used. A semicircular incision is made through the skin over the bony canal wall about 5 to 7 mm. external to the drum, and the skin is separated from the bone as far as the drum. The drum is then lifted out of the sulcus and reflected upward, exposing the tympanic cavity.

In half the cases, the chorda tympani is immediately visible for about 4 to 6 mm. close to the edge of the posterior bony canal. In the rest, the nerve is teased into the tympanum from just behind the bony edge of the canal wall. The chorda is engaged in a small iris hook, pulled outward, and cut. Jacobson's nerve

Surgery in Ménière's disease. Ann. Otol., Rhin. & Laryng. 60:657-666, 1951.

and branches are scraped away from the promontory and sectioned with a sharp dental hoe. Jacobson's nerve often will be found completely encased in bone.

Electric stimulation of the intact chorda tympani and stimulation of the central end of the sectioned chorda are followed instantly by intense contraction of the entire same side of the face. Some patients report a pronounced increment in tinnitus and rotatory vertigo with each stimulation.

No hearing loss occurs after the operation, which can safely be performed on both ears if the disease is bilateral. In 11 of 14 cases, vertigo disappeared after surgery. Tinnitus either disappeared or diminished so that the condition was not annoying in half the cases.

Only two or three days of hospitalization are required for the procedure.

Standing Bed for Poliomyelitis

PAUL R. HARRINGTON, M.D., AND HELEN M. DOBBIN

A TILTING bed adjustable to the best angle for physical therapy hastens recovery from extensive paralysis.

With body well supported and held down by a broad knee binder, the patient may exercise alone or with the help of only one technician, whereas two or more are usually required.

Beds of two sizes are endorsed by Paul R. Harrington, M.D., of Baylor University, Houston, and Helen M. Dobbin of the Veterans Administration Hospital, Coatesville, Pa.

The larger is of regular hospital type with adjustable head and foot, but supported on pillar blocks. A narrower rigid style has angle iron frames and a firmly welded footpiece. The cot is raised and lowered by hand or motor and may be moved from room to room. As many as 40 invalids, including many with quadriplegia, are served by 2 beds.

To prevent a feeling of insecurity, the standing angle should not exceed 75 to 80 degrees. The tilt may be reversed to a modified Trendelenburg position for tidal respiratory drainage.

Upright posture stimulates coordination and balance, while independent movements restore self-confidence. All major muscle groups are rehabilitated except in the upper extremities. In addition, calcium metabolism, circulation, and vital capacity may be improved.

The standing bed might also be used to advantage for patients with fractures, heart disease, geriatric conditions, and debilitating chronic illness such as tuberculosis.

Standing bed in poliomyelitis. Phys. Therapy Rev. 32:12-14, 1952. The standing bed in physical therapy. Ibid. 32:14-17, 1952.

For protection against excessive sunlight and loss of retinal sensitivity, the darker the glasses the better.

Sunglasses and Retinal Sensitivity

R. H. PECKHAM, PH.D., AND R. D. HARLEY, M.D.
Temple University, Philadelphia

EXCESSIVE exposure to bright sunlight without the protection of dark glasses causes loss of retinal sensitivity and reduction of the visual response to light stimulus.

The effect is most noticeable immediately after exposure, but dark adaptation may be slow for days or weeks afterward and may be a factor in industrial and automobile accidents.

The loss may be reduction of light to one-half the photometric value, often more. Thus, if workers have been exposed, the illumination of industrial and clerical working areas can easily become seriously insufficient. Night driving after a day at the beach without sunglasses can be particularly dangerous.

Sunglasses are rarely dark enough to give effective protection. A few are available commercially, both ground and polished and in the much less expensive coquille form. These latter do not affect visual acuity and can be recommended if dark enough. The conclusion would seem to be "the darker the better." If the wearer's eyes can be seen behind the lenses, the lenses are probably not dark enough.

R. H. Peckham, Ph.D., and R. D. Harley, M.D., made several studies of the effect of sunglasses in protecting the retinal sensitivity of lifeguards at an Atlantic City beach. For one analysis, the men were divided into three groups. The first wore dark sunglasses of 10 to 12% density; the second, light commercial sunglasses of 35 to 50% density; and the third, no sunglasses. Eyes were tested morning and evening four times a week over a period of six weeks.

The following conclusions were reached: Sunglasses of commercial density, 35 to 50%, supply some protection to the retina against the excessive sunlight at the beach for periods of a day or less, but do not protect against such exposure for periods of a week or more.

The wearing of dark sunglasses, 10 to 12% density, provides protection from excessive sunlight for as long as a week or more.

Since both the light and dark sunglasses effectively absorb ultraviolet and infrared light, these extravisual rays cannot be considered the cause of the loss of retinal sensitivity. The etiologic factor is the visible portion of the solar radiation, probably effective through the extreme light adaptation that becomes manifest after exposure to excessive illumination.

Subsequent dark adaptation illumination is delayed for a period of days or weeks after such exposure.

The effect of sunglasses in protecting retinal sensitivity. Am. J. Ophth. 34:1499-1507, 1951.

An artificial eye base buried in the orbit obviates extrusion risk and gives good motility and appearance.

Grooved Enucleation Implant

CHARLES HYMES, M.D.
University of Minnesota, Minneapolis

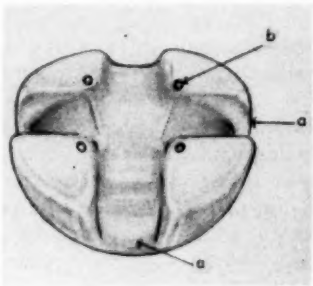
AN excellent base for an artificial eye is a grooved plastic hemisphere completely buried in the orbit, flat side to the front.

Rectus muscles are fitted into the channels and sewed together over the anterior surface. When the eye is adjusted, movement is exceptionally free and the appearance satisfactory. The implant is not extruded, as often happens with a partly buried or integrated type.

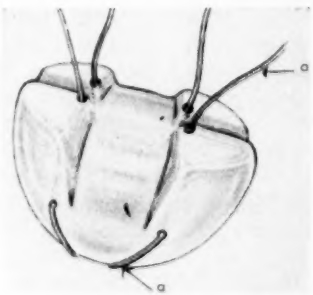
The implant, made of methyl methacrylate resin, has a diameter of 21 and a depth of 12 mm.

The grooves for the four recti are 5 mm. wide, 1 mm. deep anteriorly and 2 mm. at the circumference, and gradually merge with the posterior surface.

Perforations are supplied for stay sutures, threaded diagonally from back to front.



Hemispheric implant showing grooves [*a*] and perforations [*b*] for stay sutures



Stay sutures [*a*] are threaded diagonally from the back.

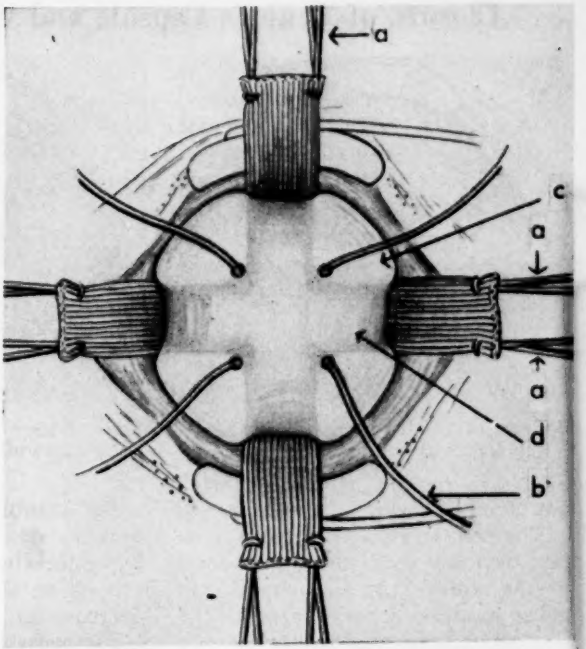
During the enucleation, Charles Hymes, M.D., undermines the conjunctiva and Tenon's capsule in the usual manner. The recti are stripped back about 15 mm. from their insertions, and 2 slightly chromicized catgut sutures are then lock-stitched to the edge of each muscle close to the insertion.

The recti are cut from the eyeball and retracted, the optic nerve and oblique muscles are severed, and bleeding is controlled. The implant is placed in the muscle cone with rounded surface to the back, and the four loose ends of suture in the perforations are retracted.

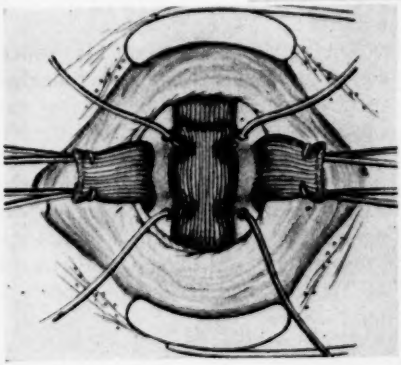
The upper and lower recti are overlapped approximately 4 mm. and fastened edge to edge with the lock-stitched sutures. The horizontal muscles are also overlapped in the same manner but are

A new grooved enucleation implant. Minnesota Med. 34:771-774, 1951.

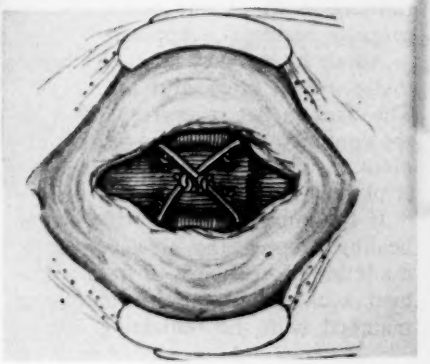
Fixing the Rectus Muscles into the Grooved Hemisphere



Implant in position in the muscle cone. Sutures retract the four rectus muscles [*a*]. Stay sutures in place [*b*]. An anterior view of implant [*c*]. Grooves for rectus muscles [*d*].

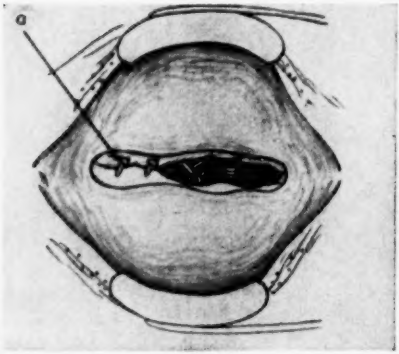


Superior and inferior rectus muscles are overlapped and sutured edge to edge.

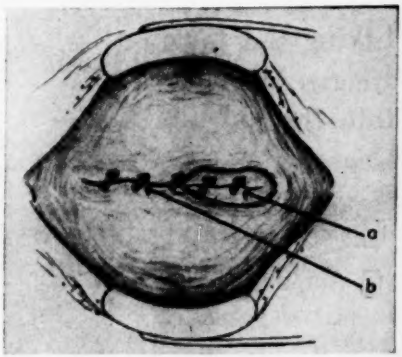


Stay sutures are tied, but not tightly, to fix implant to the rectus muscles.

Closure of Tenon's Capsule and Conjunctiva



Edges of Tenon's capsule [*a*] are sewed together with mild chromic catgut.



After closure [*a*] interrupted sutures bring edges of conjunctiva [*b*] together.

not attached to the vertical muscles.

The obliquely placed catgut is now tied over the recti, the upper nasal to the lower temporal strand and lower nasal to upper temporal. The stay sutures are tied firmly but not too tightly, to fix the recti in their respective grooves and prevent shifting of the implant.

The edges of Tenon's capsule are sewed together with 6 or 7 catgut sutures. The conjunctiva is approximated with interrupted sutures or a running stitch of fine black silk. A pressure bandage is applied.

About four weeks later, the prosthetic eye is fitted into the socket. The back is flat to correspond with the conjunctival surface over the implant. A small lip on the nasal side is placed under the caruncle.

If the implant turns a trifle in the healing process, the artificial eye is made in accordance with the permanent socket, and the iris button is matched with the remaining eye.

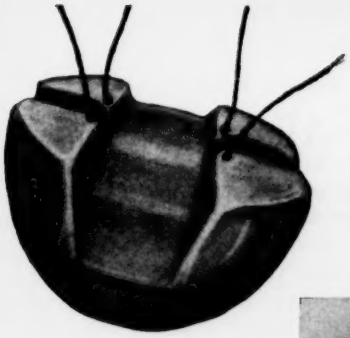
No conformer is placed in the conjunctival cul-de-sac postoperatively, since tissue does not shrink enough to warrant its use. A little decrease in size of the cul-de-sac is compensated by enlarging the artificial eye.

The grooved implant is much easier to insert than the tunneled form. Because of wide surgical exposure, suturing of muscles is simplified. Since the recti are fixed, the implant fits more snugly as orbital tissues contract. Dislodgment is prevented by complete burial within the muscle cone and by separate closure of Tenon's capsule and the conjunctiva.

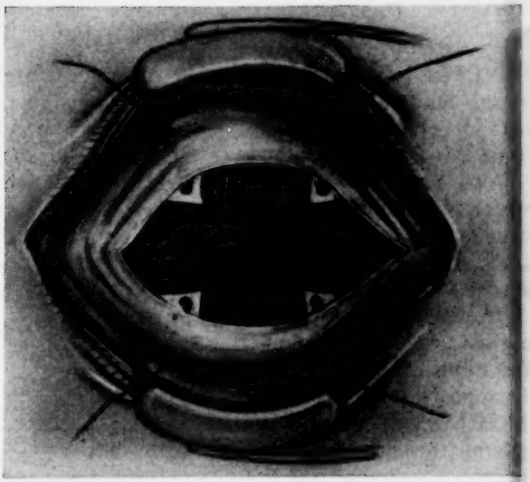
The cosmetic result is as good as with any buried round implant and almost as satisfactory as with the insecure semiburied form.

Horizontal and vertical motion is free at the start and improves with time, and the short conversational movements are especially brisk.

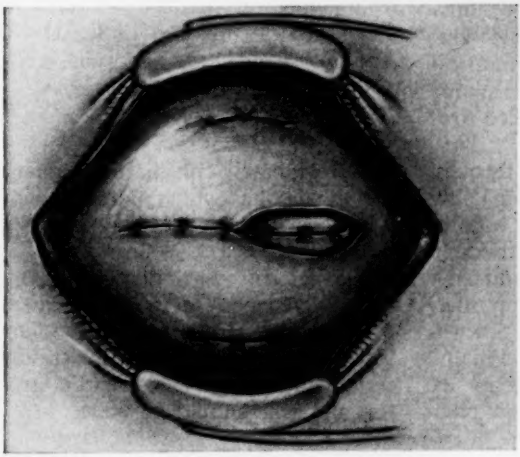
Alternate Method of Closure



Stay sutures may also be threaded from the back of the implant to the front.



The muscles are overlapped and sewed, and the fixation sutures are brought out through Tenon's capsule and conjunctiva.



The fixation sutures are then tied. With this method, the fixation sutures also relieve the tension on Tenon's capsule.

Proper management of the infant with eczema may prevent or attenuate later respiratory allergy.

Prevention of Respiratory Allergies

BRET RATNER, M.D., AND SAMUEL UNTRACHT, M.D.
New York Medical College, Flower and Fifth Avenue Hospitals, New York City

CECIL COLLINS-WILLIAMS, M.D.
University of Toronto

ECZEMA is often the precursor of other allergic states. More than half of children with eczema later have respiratory allergies.

Awareness of the frequency with which asthma or hay fever is preceded by eczema is imperative since prophylactic measures may be started.

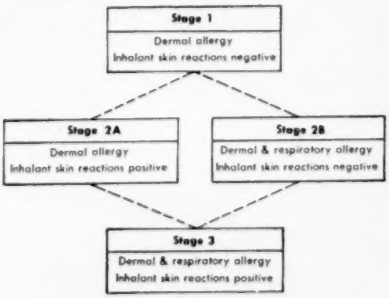
In general, eczema develops at an earlier age than other allergic manifestations. Childhood eczema usually appears before the age of 1 year. Most cases of childhood asthma begin by the age of 4, and hay fever before 7.

Bret Ratner, M.D., Cecil Collins-Williams, M.D., and Samuel Untracht, M.D., suggest dermal-respiratory syndrome as a term for the changing allergic condition frequently observed in children.

The syndrome progresses through successive stages (see diagram), beginning with a dermal allergy without respiratory symptoms or positive skin reaction to pollens or inhalants.

Later the child may develop allergic respiratory symptoms or a sensitivity reaction to inhalants. Finally, both skin and respiratory allergy are present and, in addition, skin reactions are positive with pollens or inhalants or both.

The evolutionary character of the syndrome is supported by the ages of patients falling into the various stages. Infants comprise over 60% of Stage 1 cases, whereas Stages 2 and 3 reveal a mounting preponderance of older children.



Dermal respiratory syndrome

Unfortunately, means are lacking for predicting which infants with eczema will later have respiratory allergy.

The patient with dermal allergy should receive more than local symptomatic care. A complete allergic study is indicated. Sensitivity tests with all available potential protein antigens should be done.

Allergic dermal-respiratory syndrome in children. Am. J. Dis. Child. 82:666-676, 1951.

Initially the patient is given a denatured diet, that is, all protein foods are thoroughly cooked. Scratch or intracutaneous skin tests are then performed. Evidence of respiratory allergy is sought by history, physical examination, and nasal smears.

Offending foods, as indicated by positive skin reactions, are eliminated from the diet. Environmental allergens are removed if implicated.

The patient should then receive a desensitizing course of subcutaneous injections to immunize against all inhalant and pollen allergens showing positive reactions.

If the patient with dermal allergy fails to react to any inhalants or pollens, retesting should be done at yearly intervals, especially if the skin manifestations continue or an allergic respiratory condition has started. Should newly developed sensitivities be discovered, appropriate immunization procedures are carried out.

Moreover, children with dermal allergy should be carefully observed for evidence of developing respiratory allergy. Repeated colds may be allergic rhinitis. Chronic sinus trouble or cough may be early hay fever or asthma.

Children with eczema may develop allergy to an inhalant through continued exposure. Whenever possible, potentially allergenic inhalants in the patient's environment should be removed.

Through careful observation, allergy testing, and appropriate desensitization, children with eczema may be safeguarded from later developing the more serious forms of the allergic dermal-respiratory syndrome.

¶ PERTUSSIS OUTBREAKS may be prevented in schools by chloramphenicol given to all susceptible contacts of the first child that whoops. Andrew Bogdan, M.D., of the Westminster Children's Hospital, London, obtains nasal and postnasal swabs for prompt bacteriologic diagnosis. Exposed children attending a day nursery received 100 mg. in cholesterol-coated tablets every six hours for ten to fourteen days. Symptoms were averted or arrested when treatment was started in the incubation or early preparoxysmal stage.

Lancet 261:1204-1205, 1951.

¶ IMMUNIZATION OF INFANTS with combined antigens should be done at the age of 3 to 4 months. Inherited antibodies delay but do not lessen development of diphtheria antitoxin, protection against tetanus is excellent, and pertussis agglutination occurs in 84% of cases. These conclusions were reached by Louis Greenberg, Ph.D., Department of National Health and Welfare, Ottawa, and Donald S. Fleming, M.D., of McGill University, Montreal, after the effects on 40 children were determined a month after injection and a year later.

J. Pediat. 30:672-676, 1951.

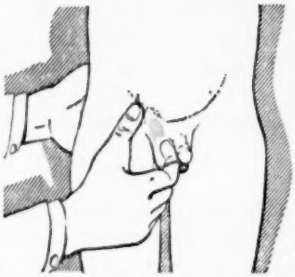
Finger-thumb technic reduces the likelihood of making an erroneous diagnosis of undescended testicle.

Diagnosis of Undescended Testis

RALPH H. KUNSTADTER, M.D.
Michael Reese Hospital, Chicago

CAREFUL examination is necessary to avoid erroneous diagnosis of undescended testis, thereby reducing the frequency with which hormone therapy is employed without any justification.

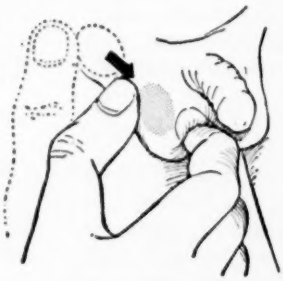
In the procedure described by Ralph H. Kunstadter, M.D., the patient is examined while standing; the examiner sits facing the patient. To palpate the right inguinal region, the examiner's left hand is placed over the patient's right buttock for support.



Palpation of testis

The thumb of the right hand is held firmly above the right internal inguinal ring. Then the right index finger is inserted into the inguinal canal, and the canal is explored, digitally, up to the abdominal inguinal ring.

Hands are reversed to explore the left inguinal canal.



Test for motility

A testis which is not intraabdominal may be palpated between the thumb and index finger.

Mobility of the testis is determined by a stripping maneuver. If the testis is fixed, downward stripping will not push the testis into the scrotum.

A mobile or migratory testis may be manipulated into the scrotum by moving the thumb and index fingers down into their original relationship, so that the two fingers are in contact with the testis. When the fingers are released, the testis usually retracts immediately to the original position.

Use of this method will accomplish the following aims:

1] Determination of the presence or the absence of the testis in the inguinal canal

2] Determination of the relative size and of the consistency of the testis

3] Differentiation between true cryptorchidism and migratory testis, or pseudocryptorchidism, and determination of the degree of mobility of the testis

4] Determination of the presence or the absence of coexisting hernia.

Technique for the diagnosis of undescended testis. J.A.M.A. 148:117, 1952.

Many common communicable diseases can be terminated rapidly and complications eliminated by antibiotics.

Antibiotics for Communicable Disease

SAMUEL KARELITZ, M.D., AND NATHAN SCHIFRIN, M.D.
Willard Parker and Mount Sinai hospitals, New York City

MANY contagious infections and the suppurative complications of viral disorders are quickly terminated by antibiotics and the sulfonamides.

Samuel Karelitz, M.D., and Nathan Schifrin, M.D., outline medication of the more common types of communicable disease:

When *diphtheria* is suspected, antitoxin should be given. Bacilli are usually eradicated by daily intramuscular injections of 300,000 to 1,000,000 or more units of aqueous procaine penicillin. Therapy is continued until three nose and throat cultures are sterile.

If patients are hypersensitive to penicillin or the bacteria are resistant, 50 mg. of aureomycin per kilogram of body weight may be effective. Carriers should receive penicillin parenterally and in nose drops or lozenges.

The same drugs are employed for pyogenic complications. Intractable acute diphtheria or carrier states may be eliminated by tonsillectomy.

Scarlet fever, like other hemolytic streptococcic infections, responds to penicillin and less promptly to aureomycin and sulfonamides.

Aqueous procaine penicillin may be provided in daily intramuscular doses of 300,000 units. If preferred, a buffered compound is taken orally, 150,000 units every six to eight hours daily for ten days. A suppurative focus sometimes requires larger doses and longer treatment, but in 9 of 10 cases temperature is normal in three days.

Children without complications do well with 300,000 units injected daily for three days, then every other day for three or four doses. For prophylaxis, sibling and adult contacts should have sulfadiazine, 1 and 2 gm., respectively, per day for seven to ten days.

The best drug for *whooping cough* is Chloromycetin or aureomycin given as long as necessary in daily doses of 50 to 100 mg. per kilogram of body weight. The preferred antibiotic should be combined with either pertussis immune convalescent serum, gamma globulin from hyperimmune serum, or rabbit antipertussis serum.

For *influenzal meningitis*, streptomycin is injected intramuscularly every six hours, in total daily doses of 25 mg. per pound or 50 mg. per kilogram of body weight for five or six days. In resistant cases, a daily intrathecal dose of 25 mg. may be given once or twice. Sulfadiazine may be added in daily amounts of about 0.2 gm. per kilogram.

Antibiotic and sulfonamide therapy in communicable diseases. Postgrad. Med. 11:17-25, 1952.

Aureomycin is employed as a substitute in large intravenous and oral doses, or sulfadiazine with streptomycin or Chloromycetin.

Intensive combination therapy of *tuberculous meningitis* is followed by complete recovery in more than half the cases.

Streptomycin is injected intramuscularly, 20 to 50 mg. per kilogram of body weight daily, but not exceeding 2 gm., divided in two to four doses. Therapy is continued six months to a year or more, and usually for at least two months after the cerebrospinal fluid has become normal.

In addition, 20 to 50 mg. of streptomycin per day is given intrathecally for thirty to sixty days, then every other day until cerebrospinal fluid has been normal for two weeks.

Promizole or some equivalent drug is also employed in daily oral doses of 100 mg. per kilogram.

Para-aminosalicylic acid is taken by mouth in four to eight doses totaling 0.3 to 0.5 gm. per kilogram of body weight daily for three or four days and then omitted one or two days. This cycle is repeated throughout the course of streptomycin therapy.

Preferred agents for *pneumococcic meningitis* are penicillin and sulfadiazine combined in liberal doses by oral, intravenous, or both routes. Persistent infection may yield to one or two daily intrathecal injections of 10,000 to 50,000 units of penicillin in 10 cc. of physiologic saline solution.

Treatment is stopped five to seven days after the fever disappears, the spinal fluid becomes sterile, and the spinal fluid sugar rises to 50 mg. or more per 100 cc.

Meningococcemia, alone or with meningitis, should be treated by sulfadiazine. About 0.1 gm. of sulfadiazine per pound of weight is administered by mouth or parenterally until spinal fluid and temperature have been normal for three days. Aureomycin and penicillin are also effective.

Children with acute fulminating disease may be aided by cortisone, 300 mg. in twenty-four hours in 100-mg. doses.

Streptococcic meningitis responds to liberal doses of penicillin and sulfadiazine.

During an epidemic when *measles* produces complications such as pneumonia, otitis media, or other suppurative conditions, especially pulmonary involvement in children under 4 years of age, penicillin or aureomycin should be given. Possibly sulfadiazine should be tried as a supplement or alone.

Purulent complications of *mumps, chickenpox,* and *German measles* may be controlled by selected antibiotics or sulfonamides, depending on types of bacteria.

Although the *common cold* is primarily viral, appropriate agents are indicated when nasopharyngeal cultures reveal pneumococci, hemolytic streptococci, or *Hemophilus influenzae.*

If cervical adenitis, otitis media, or acute sinusitis develops, penicillin or a sulfonamide drug should be given until several days after infection subsides. Mastoid involvement may require therapy for six weeks or more. Sinusitis is relieved by ad-

ditional penicillin nose drops, spray, or aerosol.

Aureomycin should be added for resistant staphylococci, and streptomycin if the organism is Friedländer's bacillus widow.

Recurrent attacks of *upper respiratory infection* and *acute rheumatic fever* are less frequent when 0.5 to 1 gm. of sulfadiazine is taken daily in fall, winter, and spring.

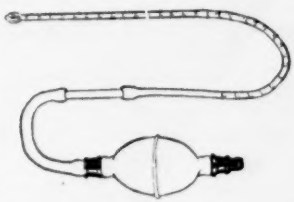
With *cystic fibrosis of the pancreas,* 50,000 units of penicillin given three times daily as an aerosol lessens the rate of pulmonary complications. For specific organisms, aureomycin or other drugs may be advisable.

Portable Suction Apparatus for Infants

ERNEST B. EMERSON, JR., M.D.

MUCUS, blood, or regurgitated formula may be removed from the upper respiratory passages of newborn or small children by a bulb suction instrument, easily carried by the physician and handy for emergency use.

Ernest B. Emerson, Jr., M.D., of the University of Rochester, N. Y., uses a round-tipped, multiple-opening catheter attached to the suction bulb by a glass adapter (see illustration). The bulb gives an adequate and safe amount of suction and the catheter does not injure the delicate membranes of the nasal passages.



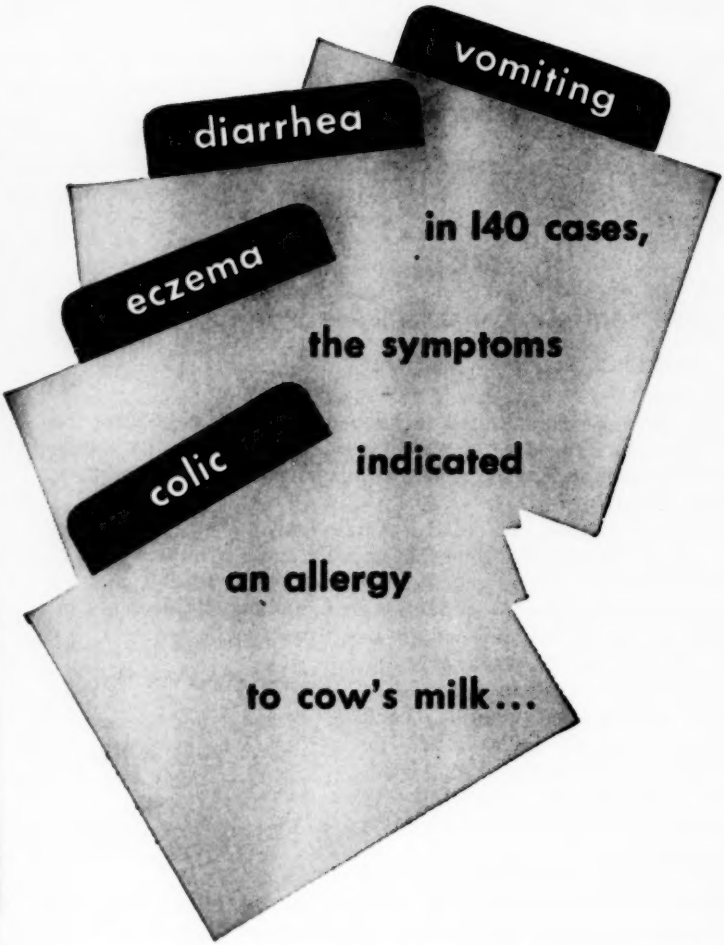
Substitution of a secretion trap for the glass adapter permits removal of excessive amounts of material or the saving of a sample for culture. The same bulb may be used for actual intratracheal suction with a brass adapter that holds suitable lengths of No. 11F ureteral catheter.

Since a small infant fights peroral insertion of a tube and most of the excessive secretions drain into the back of the throat, the instrument is passed intranasally into the hypopharynx. The hand suction bulb is pumped until the airway clears.

The procedure is no substitute for intratracheal suction and is not lifesaving in cases of congenital anomaly at the level of or below the larynx. Bronchoscopy is needed in such cases.

The apparatus is excellent for cleaning excess secretions from a child's nose before routine examination, especially if the patient is allowed to handle the suction bulb.

Nasal, nasopharyngeal, and throat suction apparatus for the newborn and small infant. Am. J. Dis. Child. 82:169-170, 1951.



relieved almost immediately by switching to

Milk is often a common factor in producing symptoms of allergy in infants and children. In a clinical study of 140 infants showing an allergy to cow's milk, Clein brought about almost immediate relief by eliminating milk and changing to Mull-Soy.* In addition to the most frequent symptoms of eczema, vomiting, colic and diarrhea, Clein listed no less than nine other symptoms, including "nose cold", asthma, choking and toxemia which were relieved by switching to Mull-Soy from the milk formula previously used.

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*Clein, Norman W.: Cow's Milk Allergy in Infants, Ann. Allergy 9:195 (March-April) 1951.

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Perceptual errors in response to simultaneous stimuli to the hand and cheek suggest organic psychosis.

Face-Hand Test of Organic Mental Disease

MAX FINK, M.D., MARTIN GREEN, M.D.,
AND MORRIS B. BENDER, M.D.
New York University–Bellevue Hospital, New York City

SEVERE mental disorders caused by actual brain lesions are generally shown by inability to perceive a touch on one cheek and the opposite hand at the same time.

During routine physical examination, the subject is asked to close his eyes. A cheek and the contralateral hand are simultaneously touched or stroked by the physician's fingers, with a question as to what is felt. The usual response is, "You touched me here," pointing to the cheek.

If only one percept is reported, the examiner asks if anything else was noted, and this is commonly denied. The test is applied to the opposite cheek and hand, then continued in a series of ten trials. Toward the end, most healthy adults reply correctly, and also those with purely psychologic disorders.

The organic mental syndrome produces four types of reaction to the face-hand test:

1] Only a touch on the cheek is recognized, implying no sensation in the hand.

2] A touch on each cheek, that is, mislocalization or displacement of the percept evoked in the hand.

3] A touch on the hand only, indicating no sensation in the cheek.

4] Correct localization of both cheek and hand percepts.

Less frequently other responses are noted, such as both percepts in the hand, or feeling in cheek and homolateral hand, with mislocalization from one hand to the other. Rarely, a hand percept is assigned to the body area where the hand rests, to the investigator's body, or out into space.

To determine diagnostic worth of the procedure, Max Fink, M.D., Martin Green, M.D., and Morris B. Bender, M.D., tested patients in the admission ward of Bellevue Psychiatric Hospital. No prior records or other clues were obtained. In every instance of repeated error, later survey disclosed that the patient had true brain disease.

Double simultaneous stimulation was applied to 400 inmates with organic brain disease, to schizophrenic adults, and to healthy adults and children.

Organically psychotic subjects had chronic alcoholism, posttraumatic encephalopathy, hypertensive cerebrovascular alterations, diffuse arteriosclerotic softening, neurosyphilis, and degenerative states such as senility or Huntington's chorea.

About 91% of 156 persons with the organic syndrome made errors on the first face-hand test, and other trials were similar. Even with severe

The face-hand test as a diagnostic sign of organic mental syndrome. Neurology 2:46-58, 1952.

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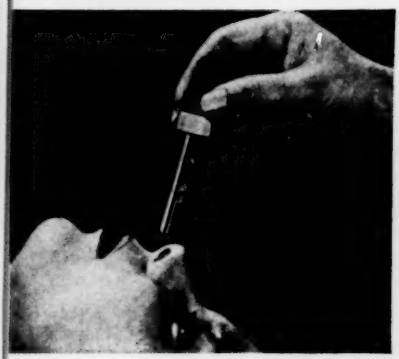

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*Thornell, W. C.: Arch. Otolaryng. 52:96 (July) 1950.

Literature on request

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dysfunction, errors formed a definite pattern, with facial sensations correctly located and hand percepts either not felt or mislocalized. In 87% of cases, mistakes persisted far beyond the tenth effort and on other days, yet single stimuli of face and hands were recognized.

Half the healthy adults and 3 of 4 schizophrenics miss one of two initial stimuli, yet by the tenth attempt, errors drop below 0.5 and 3%, respectively.

However, children 3 to 6 years old have a high rate of error paralleling the organic mental curve. Older children and aphasic individuals without organic lesions respond almost like ordinary adults.

Obviously, the pattern of face dominance and hand extinction is acquired early in life, not as a result of brain disease, and is inherently organized. The inference, not proved, is that persistent adult errors indicate regression to the infantile level.

Tests combining face and trunk, foot, or other parts repeatedly show face dominance, but face and hand represent the widest difference.

A number of factors influence test results. Perception is most defective when cerebral disturbance is acute, with rapid onset and short duration. More errors are made with severe head injury, infection, neoplasm, and vascular accident than with senility or chronic alcoholism.

Under the influence of intravenous sodium amytal and during recovery from general anesthesia or electroshock, adults who commonly do not make mistakes on face-hand tests respond like those with organic psychosis.

Use of Benadryl for Thalamic Pain

RALPH W. BARRIS, M.D.

HYPERPATHIA, resulting from vascular lesions in the thalamus, often produces agonizing sensations in the affected side when the patient is being bathed or massaged. Even pressure of bedclothes may cause discomfort. In addition, excruciating pain may develop spontaneously and is often felt on passive movement of the arm or leg.

Physical therapy of the hemiplegic is thus delayed, tendons contract, muscles atrophy, and joints become severely ankylosed.

Ralph W. Barris, M.D., of the University of California, Los Angeles, finds that large doses of Benadryl reduce both hypersensitivity and the sudden attacks of pain, frequently allowing fairly rapid recovery and rehabilitation of paralyzed muscles.

When 400 to 600 mg. of Benadryl was given orally daily for a few weeks to two months or more in 17 such cases, results were excellent in 5, good in 10, and fair in 2 instances.

Use of Benadryl for symptomatic relief of "thalamic pain." Neurology 2:59-64, 1952.

A New and Improved Therapy for DERMATITIS *in Hairy Areas*

Case: **40 year old male, laborer.**

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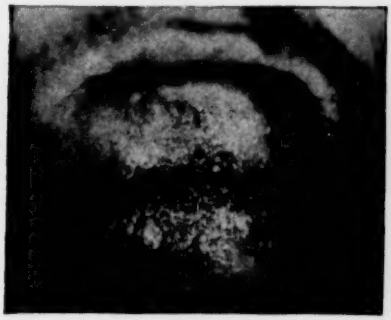

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Medical Forum

Discussion of articles published in MODERN MEDICINE *is always welcome. Address all communications to The Editors of* MODERN MEDICINE, *84 South 10th St., Minneapolis 3, Minn.*

Therapeutic Efficacy of Electrocoma*

Comment invited from
E. H. Parsons, M.D.
O. Spurgeon English, M.D.
Jules H. Masserman, M.D.

► TO THE EDITORS: The indication for electroshock therapy is depression. This is pointed out in the excellent paper of Drs. Joseph L. Fetterman, Victor M. Victoroff, and Jack B. Horrocks and is generally accepted by psychiatrists, both officially and unofficially. Electroshock therapy is almost a requisite in cases of depression.

In competent hands, utilizing some of the more modern unidirectional equipment, electrocoma therapy is an excellent adjunct to a total therapeutic program including medicinal agents, other physical procedures, and psychotherapy. It should be emphasized, however, that there is a proved and well-established indication for electroshock therapy in depressions regardless of the nature or etiology. There is no other well-established known specific indication for electroshock therapy, although it may, especially in its modified technics, be used as an adjunct procedure in other syndromes.

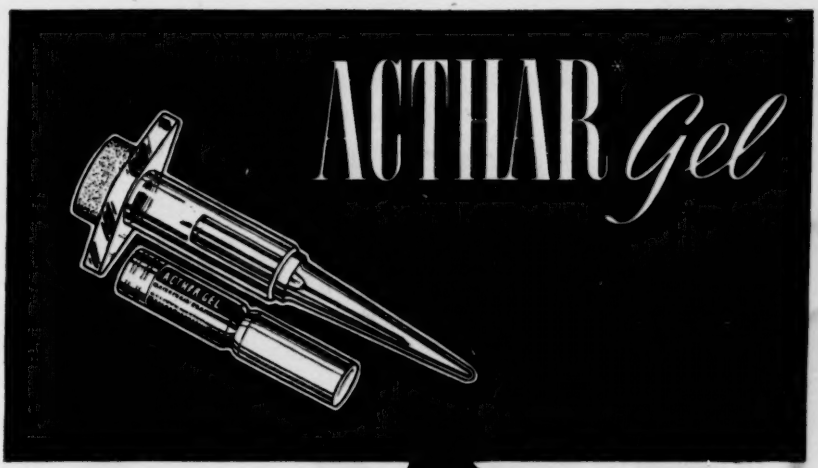
*MODERN MEDICINE, Feb. 1, 1952, p. 111.

The therapeutic efficacy of electrocoma is well stated by the authors. These workers report, however, from a well-organized psychiatric clinic where the technic of electrocoma therapy is established and treatment is administered by skilled technicians as well as physicians expert in the selection of cases and the administration of this therapeutic measure. In their hands and in the hands of similarly trained groups this procedure is a simple, safe, and extremely efficacious one when indicated.

Electroshock therapy is not, however, a procedure for the unskilled. It requires a nursing and technical team. In our experience this treatment may be given to out-patients, or on the medical or surgical floors of general hospitals, or quickly and efficiently without the use of shock rooms and without surrounding the procedure with the aura of major surgery, but it must be given by a trained team, for there are inherent complications not evident in the workings of a skilled group.

We are sometimes asked if, since electroshock therapy is so simple, it cannot be done by almost every physician. I think the answer is that it may be done by almost any physician *after* he has been trained in the

(Continued on page 135)



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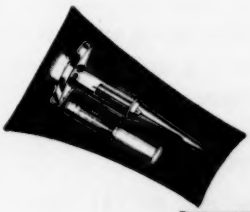

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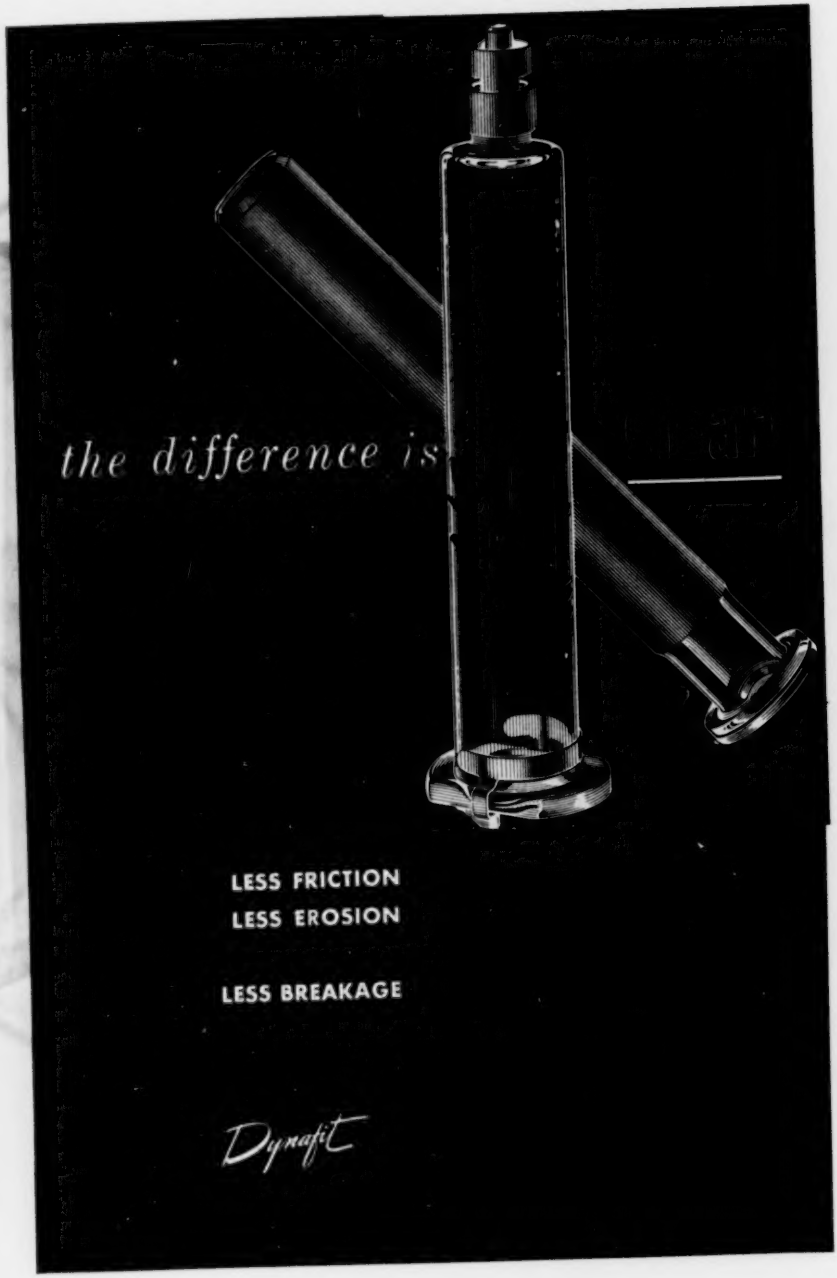
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technic and has, in turn, trained his own crew of nurses and assistants. I would regard a prefrontal lobotomy as a very simple neurosurgical procedure. My neurosurgical colleagues do it swiftly, and so far as I know simply and easily, without complications. But, if I were to do the procedure I would regard it as one of major risk to the patient and distinctly dangerous to everybody concerned including, I am afraid, me.

I trust that this makes clear the point which should be emphasized.

E. H. PARSONS, M.D.
St. Louis

► TO THE EDITORS: In my experience, electroshock therapy has been valuable for patients with quite marked depression of spirits of reasonably sudden onset. By reasonably sudden onset, I mean within the past few weeks or perhaps the past few months.

This would include the depressed phase of the manic-depressive psychosis, involutional psychosis where depression is a marked feature, and an occasional case of schizophrenia in which again depression of spirits, guilt feelings, and self-criticism are quite prominent. The results are almost uniformly good in the cases described. The treatment works less well in the manic phase of the manic-depressive psychosis.

Electroshock therapy, in our experience, has been practically useless in any type of schizophrenia except the one described and even then it does not work well in all cases. I have never seen electroshock therapy of benefit in psychoneurosis with the possible exception of an occasional case of compulsive neurosis with periodic waves of depression. Electroshock therapy in our hospital is always combined with psychotherapy during and also following treatment.

It should be borne in mind that electroshock therapy is used by some who would prefer to use a psychotherapeutic approach if circumstances permitted. However, families who have had a member depressed for some time do not have the patience for either hospital or outpatient psychotherapeutic treatment and want the most immediate result obtainable. Economic circumstances also lead the physician to decide in favor of electroshock therapy, which gives a quick result, rather than the one that is most beneficial educationally.

O. SPURGEON ENGLISH, M.D.
Philadelphia

► TO THE EDITORS: Drs. Fetterman, Victoroff, and Horrocks wisely call attention to the necessity for a critical selection of patients for electroshock but, unfortunately, some others devoted to facile switch pressing do not make their selection critical enough.

In the first place, there is now grave doubt whether any such entity as "manic-depressive psychosis" with cyclic "phases" exists. People under excessive stress may become warily anorexic and sleepless, tense, discouraged, helpless, and demandingly dependent (i.e., depressed) or they may seek temporary diversion from their nagging anxieties in restless, harried overactivity and

spurious euphoria (i.e., hypomania). However, there are all gradations, variations, and combinations of such reactions from normal through neurotic to psychotic, and some of these outmoded Kraepelinian terms are coming to have as little meaning in modern psychiatry as the Galenic humors have in modern medicine.

The same can be said for the concept of schizophrenia, which is also a blanket term for a highly protean set of reactions in which the patient attempts to distort or deny reality, sever whatever interpersonal relationships seem to threaten him, and retreat to a world of solipsistic fantasy and activity.

True, any of these reactions can be temporarily diverted by almost any form of interference with cerebral function, whether by drug narcosis, carbon dioxide asphyxia, carbohydrate starvation in insulin coma, or electrically induced cerebral diaschisis. In the latter case, as has been shown clinically and as my associates and I recently demonstrated experimentally, phobias, compulsions, panic states, regressions, and so forth, may be disorganized long enough to permit the psychiatrist to establish sufficient contact with the patient to use various more fundamentally corrective psychotherapeutic procedures (Masserman, Jules H., *Principles of Dynamic Psychiatry*, W. B. Saunders, Philadelphia, 1946; *Am. J. Psychiat.* 104:92, 1947; *J. Nerv. & Ment. Dis.* 112:384, 1950).

The experience of electroshock in itself may have profound psychologic significance for the patient—for example, magical fantasies of death and rebirth under the ministrations of a powerful but kindly and reassuring physician whose subsequent directions, whether explicit or implied, had better be followed. Nevertheless, it must also be recognized that electroshock, especially in the drastic forms in which it is too frequently employed, temporarily and possibly permanently impairs intellectual functions (though in many instances this impairment remains subclinical), that it is worse than useless unless the physician has the skill and facilities to rehabilitate the post-shock personality, and that in a great many instances this rehabilitation can be accomplished more fundamentally, satisfactorily, and durably by less drastic and less dangerous methods. We may and should, when necessary, occasionally employ the shock therapies, but with broader orientations and more circumspection than is frequently the case.

JULES H. MASSERMAN, M.D.
Chicago

Rheumatic Fever Symposium*

Comment invited from Fergus J. O'Connor, M.D.

► TO THE EDITORS: In the recent rheumatic fever symposium edited by Dr. Arild E. Hansen, I was particularly interested in the emphasis on keeping the individual at rest and under observation for sufficient time to complete the diagnosis. This period, being one of restricted activity and tonic medication, is of value in any illness and of definitely more

(Continued on page 140)

*MODERN MEDICINE, Oct. 1, 1951, p. 69.

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The author observed an average

*Lund, C. J.: Studies on the Iron Deficiency Anemia of Pregnancy, Am. J. Obstet. & Gynec. *62*:947 (Nov.) 1951.
(Reprint available upon request)

Iron-Deficiency Pregnancy Anemia

hemoglobin gain of 2.9 Gm. per cent in 4 weeks of Mol-Iron therapy during late pregnancy; this is almost identical with the frequently reported figure of 2.8 Gm. per cent in 3.7 weeks following *intravenous* iron.

RESPONSE TO MOL-IRON THERAPY

		BEFORE TREATMENT	WEEKS OF TREATMENT					
			2		4		6	
	TIME	MEAN	MEAN	% INCREASE	MEAN	% INCREASE	MEAN	% INCREASE
Hgb. Gm. %	Early*	7.4	8.9	13	9.6	26	9.7	28
	Late†	7.1	9.0	20	10.0	36	10.6	47
Total hgb. Gm.	Early	327	416	27	512	56	612	87
	Late	335	407	20	507	54	595	80

*Treatment initiated during the period of rising plasma volume (before 32 to 34 weeks gestation).
†Treatment initiated thereafter.

WELL TOLERATED

Of a total of 75 patients receiving Mol-Iron therapy, Lund observed only one (1.3 per cent) who was unable to continue the medication because of gastrointestinal disturbances.

SUGGESTED THERAPEUTIC PLANS

"The results of this study suggest the following therapeutic plans. If the anemia is discovered during the first or second trimester, active treatment with iron will not only restore the normal amount of hemoglobin, but will also reproduce the normal increase in total hemoglobin. Treatment may be stopped at delivery. If the anemia is discovered during the last trimester, full normal response is not usually obtained before delivery; in such cases the treatment should continue for 6 or 8 weeks postpartum."

COMMENT

Utilizing newer biochemical determinations, this study* indicates that Mol-Iron is an exceptionally effective iron preparation. Thus it gives strong emphasis to the already extensive evidence that has accumulated demonstrating the definite therapeutic superiority of Mol-Iron.[1-8]

Mol-Iron supplied as: Mol-Iron Tablets, Mol-Iron Liquid, Mol-Iron Drops, Mol-Iron with Calcium and Vitamin D (capsules), Mol-Iron with Liver and Vitamins (capsules). White Laboratories, Inc., Kenilworth, N. J.

1. Dieckmann, W. J., and Priddle, H. D.: Am. J. Obstet. & Gynec. *57*:541, 1949.
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value should the diagnosis be that of rheumatic fever.

With our advances in many fields, it is interesting to see the emphasis on the basic symptomatology of T. Duckett Jones as a criterion for the diagnosis of rheumatic fever.

Because the cardiac involvement does not present itself to the public as a crippling element, far too little publicity is given to rheumatic fever and its seriousness. If we could educate the public to be more aware of the prevalence of rheumatic fever and its end results, we could make really great advances.

Early diagnosis and proper therapy will keep down the more serious complications.

FERGUS J. O'CONNOR, M.D.
Kingston, Ont.

Treatment of Acute Otitis Media*

Comment invited from
Barnard C. Trowbridge, M.D.
Hugh Carithers, M.D.
J. W. McLaurin, M.D.

►TO THE EDITORS: I agree with Dr. Miriam H. Rutherford that chemotherapy and antibiotics alone are not sufficient for the treatment of otitis media.

In cases of acute suppurative otitis media, thorough cleansing of the external canal and the middle ear cavity is essential for rapid recovery and to prevent the formation of secondary chronic adhesive processes in the middle ear. Pinpoint aspiration of the external canal and the middle-ear cavity at or through the tympanic perforation makes complete evacuation of suppurative products possible. This procedure greatly simplifies the care of suppurative otitis media in children in whom the thorough cleansing of the external and middle ear is practically impossible by wick or swabbing methods.

In addition to the cleansing of the ear, adequate chemotherapy and antibiotics are necessary. Very gratifying results are obtained by insufflating a mixture of sulfathiazole and penicillin crystals every two to three days into the thoroughly cleansed middle-ear cavity.

Acute nonsuppurative otitis media is successfully aborted in the majority of cases by early and adequate chemotherapy and antibiotics. The purpose of this treatment is not only to combat the ear infection but also to attack the primary source of the infection—the naso- and oropharyngeal infection. Only occasionally is myringotomy necessary when adequate treatment of the upper respiratory tract infection is instituted early. Myringotomy is indicated when actual bulging of the drum head occurs and not with simple myringitic edema.

Chemotherapy and antibiotic therapy should be continued until the ear is dry in acute suppurative otitis media and until the edematous myringitis has subsided in acute nonsuppurative otitis media.

In recurrent otitis media, attention must be directed to alleviating pharyngeal pathology, that is, adenoids, tonsils, eustachian tube lymphatic tissue proliferation, allergy, and sinusitis.

BARNARD C. TROWBRIDGE, M.D.
Kansas City, Mo.

*MODERN MEDICINE, Jan. 1, 1952, p. 103.

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'Perazil' gives practical protection from the effects of allergens. Observers have agreed that: "The percentage and severity of side reactions was very low. Due to the longer duration of action of 'Perazil', less frequent administration of tablets was necessary."[1]

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1. Cullick, L., and Ogden, H. D.: J. So. Med. Assn., 43:643, 1950

Burroughs Wellcome & Co. (U.S.A.) Inc., *Tuckahoe 7, N. Y.*

►TO THE EDITORS: The obvious fact that mastoid operations have practically disappeared from the repertoire of the ear, nose, and throat surgeons is ample evidence that antibiotics and chemotherapy are effective.

Myringotomy has a place but is usually not necessary in any otitis media seen early.

HUGH CARITHERS, M.D.
Jacksonville, Fla.

►TO THE EDITORS: My reply to the question, "Are chemotherapy and antibiotics sufficient for treatment of otitis media?" would be an unqualified "No."

These agents are *efficient* as supplemental measures. They are not *sufficient* alone. Their introduction has in no way altered the fundamental surgical fact that the drainage of pus must be accomplished by surgical means. The proper treatment of otitis media requires the incision of the tympanic membrane whenever an exudate is suspected. If no exudate is present, no harm is done. If exudate is present, it should be evacuated completely.

Additional treatment depends upon the progress of the patient. Often nothing else is necessary. If, however, toxicity is not relieved within twenty-four hours, chemotherapy or antibiotics are instituted, the selection of the drug depending upon the type of infection present. Whatever agent is selected must be given in adequate dosage and over a sufficiently long period of time. Continued infection is the inevitable result of too early withdrawal.

It is a hopeful sign that more and more observers are calling attention to the dangers of indiscriminate chemotherapy and use of antibiotics. Because of the masking effect of the agents, it is perfectly possible for mastoiditis, facial nerve paralysis, and even meningitis and brain abscess to develop insidiously while the drugs are being administered.

I am also becoming increasingly concerned with the possible effects on hearing of the indiscriminate use of these modern agents. This is particularly true when otitis media is unilateral. A bilateral hearing deficiency is likely to show up fairly promptly. A unilateral defect does not trouble a young child, and is not likely to be observed by the adults who care for him. The condition may therefore progress to irreversible deafness before it is detected. I have always believed that most of the so-called adhesive deafness of adult life is the result of inadequate treatment of middle-ear disease in childhood.

There is a widespread tendency at the present time to treat middle-ear disease by antibiotic therapy without surgical measures, often without a complete history and local examination. If this tendency continues, the time will come when we shall list chemotherapy and antibiotics as prominent causes of both childhood and adult deafness.

J. W. MC LAURIN, M.D.
Baton Rouge, La.

Correction

Roniacol was spelled with a "T" instead of an "R" on page 104 of the February 1, 1952 issue of *Modern Medicine*. The name is correctly spelled with an "R."—Ed.

Exchange Transfusion for Erythroblastosis*

Comment invited from
Louis K. Diamond, M.D.
M. M. Wintrobe, M.D.
O. J. Pollak, M.D.

►TO THE EDITORS: In a series of articles published last year in *Pediatrics, American Journal of Diseases of Childhood,* and *New England Journal of Medicine* we expressed our favor of exchange transfusion with whole blood for erythroblastosis.

A scientific and unbiased study of treating infants with erythroblastosis in random or alternate fashion, giving some packed cells and others multiple small transfusions while still others receive exchange transfusion of whole blood, is being carried out elsewhere and the results should be available for review fairly soon. We have not felt free to pursue this method because of the excellent results achieved by our technic and the relatively poor results we had formerly.

The very good article by Drs. Henry W. Kaessler and James J. Ledgard offers an alternative method for performing exchange transfusion with whole blood, using the saphenous vein rather than the umbilical vein. We have almost never encountered difficulty in our patients with erythroblastosis fetalis transfused via the umbilical vein, but operators who have acquired skill in the cut-down method using either the saphenous or any other peripheral vein may find this technic easier and, as far as we know, the results are no different.

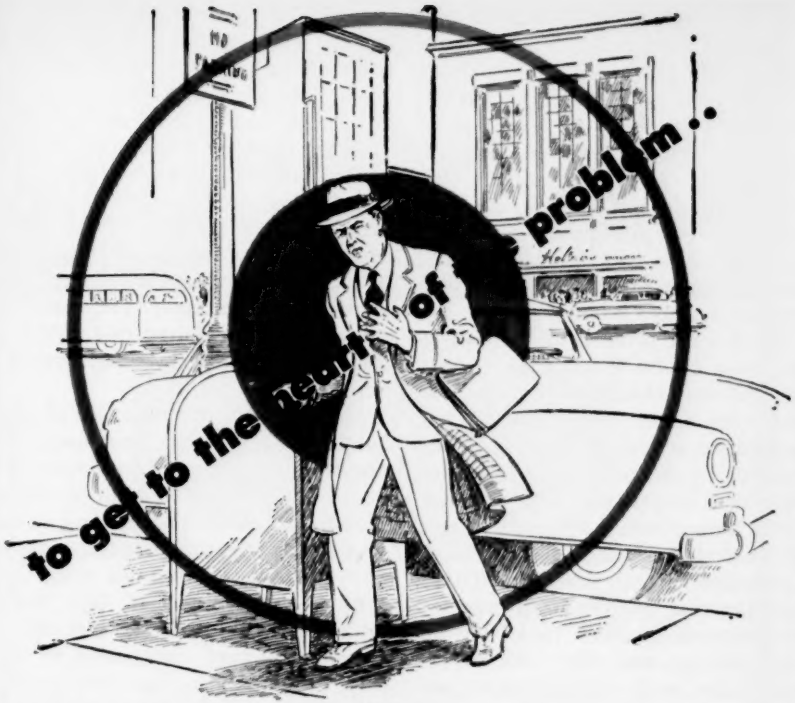
The authors' indications for exchange transfusion differ from ours only in that they mention icterus at birth, which we believe is not seen but does develop very rapidly, sometimes immediately after birth. Also, the Coombs test alone is not, in our belief, an indication for exchange transfusion when there are no other evidences of blood destruction.

And finally, we should like to stress that a positive balance is sometimes dangerous to the very sick infant because, as Mollison has pointed out and as we have confirmed repeatedly, the more severely ill infant often has a high venous pressure. This imposes a serious burden on the heart. The pressure must be reduced by leaving a negative balance, even at the risk of some anemia. The anemia can be treated later (between the first and the third week) with one or more small transfusions of packed cells though, actually, subsequent transfusions are very seldom needed.

In trying to answer the question as to why whole blood is preferable in exchange transfusion of erythroblastotic infants, there is the general problem: "What is the primary aim of exchange transfusion?"

If, as we believe, the most important thing is the *removal* from the baby of its damaged red cells, circulating blood pigments, passively acquired maternal antibodies, and, quite possibly, other toxic by-products of red cell breakdown, then the volume of the exchange transfusion is of primary importance. The removal of plasma from the donor blood decreases the volume unless 2

*MODERN MEDICINE, Jan. 15, 1952, p. 97.



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PHENOBARBITAL (16.2 mg., ¼ gr.) to alleviate anxiety and nervous tension, so common in hypertensive patients

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units of blood are used. In general, it is probably preferable to use a single unit of donor blood, even if unlimited quantities are available.

Second is the problem of the baby's serum proteins. These are depleted to a considerable extent by the substitution of relatively, or absolutely, plasma-deficient blood for the baby's whole blood.

Third is the problem of the baby's red blood count. It has been widely assumed that erythroblastotic babies should do better if their counts are maintained at high levels. That such may not be the case is suggested by our own experience that babies whose hemoglobin is less than 13 gm. per cent at the end of the exchange transfusion, as has almost invariably been the case in over 500 babies we have treated, recover rapidly from their disease and very seldom require later small transfusions to carry them through the "aregenerative" phase of their anemia.

The one most important consideration in the treatment of erythroblastosis fetalis is the prevention of brain damage (kernicterus). We have demonstrated that prevention of kernicterus is possible by the early and liberal use of exchange transfusion, repeated when necessary for the control of increasing jaundice. The inevitable conclusion is that the etiology of kernicterus is inextricably related to severe degrees of jaundice, although the exact mechanism has not yet been proved.

Since the source of jaundice is the breaking down of red blood cells, it is highly important to remove as many as possible of the baby's red cells in the course of exchange transfusion. When the volume of the exchange is twice that of the baby's blood volume, a considerable amount of blood pigment is removed—about 85% of the circulating pigment, and as much as 30% of the total pigment in the body. This mechanical removal of pigment is believed to be of very great importance in the prevention of kernicterus. The removal of passively transferred maternal antibodies is of some, though minor, importance.

In any case, the amount of the baby's cells, pigment, and antibody removed by exchange transfusion depends solely on the amount of donor blood used in the process and in no way on the red cell concentration of such blood. Following this same reasoning, the removal of less blood from the baby than is introduced during exchange transfusion is unwise because of the fact that the efficiency of removal is thereby reduced, in addition to which the resultant increase in the baby's blood volume may have disastrous results in babies who are in, or on the verge of, circulatory failure.

Drs. Alexander S. Wiener and Irving B. Wexler advocate the use of packed cells instead of whole blood in their paper on exchange transfusion.† Obviously, from the facts presented above, this is not a suitable treatment for an infant with erythroblastosis fetalis who *needs* exchange transfusion. The series of cases reported in this article is far too small for any definite conclusions and the mortality of 10% is certainly no better than that achieved

†MODERN MEDICINE, Jan. 15, 1952, p. 98.

Carbonated Beverages Help Maintain Vital Sugar Levels in the Body.

That carbohydrates form an essential part of the diet has long been recognized by nutritionists[1], clinicians[2], and dentists[3,4] alike.



Physiologically, carbohydrate is synonymous with glucose in that only this sugar can be used directly by the body. It is significant, too, that the total sugar storage capacity of the body is relatively small, amounting to only enough to last the average adult about thirteen hours and the supply must be constantly maintained, mostly by dietary means.

But sugar is more than a "food"! It provides the sole source of fuel for the brain and other nerve tissue; it is the most efficient fuel for muscular contraction; it spares body proteins, prevents acidosis and ketosis, detoxifies and increases tissue resistance to infection[5], and through its effective concentration in the blood, it maintains consciousness—a versatile substance indeed. Bottled carbonated soft drinks offer a zestful, palatable and convenient means by which to supply sugar when needed.

The "three-meals-a-day" routine does not always suffice to maintain the highest levels of muscular and mental efficiency. Peak efficiency is reached about an hour after a meal, then falls off steadily to a low point unless sugar is given between meals[6]. **There is no excuse for the "let-down" when carbonated soft drinks are available.** It is considered sound nutrition practice to supply sugar when needed most. Small amounts are necessary to replenish used-up stores and thus maintain efficiency.

On the average, a bottle of flavored carbonated beverage contains one hundred calories or less, in a form rapidly absorbed and transformed into food energy. As a guide to sound nutrition, the Food and Nutrition Board of the National Research Council recommends use of the Seven Basic Foods in amounts which leave ample leeway for you to enjoy your favorite soft drink.

1. JOLLIFFE, NORMAN, ET AL: Clinical Nutrition, p.585. N.Y. 1950. Paul B. Hoeber, Inc.
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y exchange transfusion using whole lood. In addition, the danger of ernicterus is great and it might be elpful to inquire from Drs. Wiener nd Wexler whether they still have he same good luck in avoiding such amage by the use of packed-cell ransfusion only.

The only conclusion we should be illing to accept at this time, there- ore, is that erythroblastosis fetalis, hen it presents the indications list- d by us, should be treated by ex- hange transfusion using whole lood and not by concentrated red ells or multiple small transfusions r any other recommended method.

LOUIS K. DIAMOND, M.D.

Boston

►TO THE EDITORS: I would say that n most circumstances packed red ells would be more satisfactory for eplacement or exchange transfusion han whole blood.

M. M. WINTROBE, M.D.

alt Lake City

►TO THE EDITORS: An erythroblas- otic infant primarily needs mature ed blood corpuscles which will not e affected by the plasma antibodies. econdly, as the simultaneous pres- nce of corpuscular antigens (in the Rh+ cells) and antibodies bears the anger of intravascular agglutination nd thrombosis, it is necessary to re- nove the infant's own red blood ells. Either of the two requirements an be filled by whole blood trans- usion as well as by the injection of acked washed erythrocytes of prop- r group and type.

While the injection of packed cells is speedier than whole blood transfusion, it is technically more difficult because of the density of the material, especially when treatment has been delayed and the umbilical vein is thrombosed. Injection of packed cells and withdrawal of whole blood result in loss of plasma which might have to be adjusted by plasma infusion subsequent to the erythrocyte injection.

Accumulated statistical data are still too small to allow conclusions as to whether one or the other method results in greater salvage of infants born with hemolytic disease. Thus, the choice of method should, for the present at least, be left to the discretion of those who administer treatment.

O. J. POLLAK, M.D.

Quincy, Mass.

Neurocirculatory Asthenia*

Comment invited from A. J. Murchison, M.D.

►TO THE EDITORS: Neurocirculatory asthenia, effort syndrome or soldier's heart, discussed by Dr. Nathaniel E. Reich, is basically an anxiety neurosis. Anxiety is the basic psychologic factor and, in a constitutionally predisposed individual, can so stimulate the autonomic nervous system that the most vulnerable division exhibits dysfunction.

We find anxiety in one individual producing cardiac symptoms, in others gastrointestinal or respiratory complaints; the majority of the conditions now included under psycho-

*MODERN MEDICINE, June 1, 1951, p. 71.

somatic medicine are actually anxiety neuroses with psychologic manifestations. In diagnosing these conditions, an evaluation of the basic personality factors is very important.

Anxiety states may arise when the emotional or social adaption of the individual is threatened by any situation or group of circumstances, real or imaginary. Feelings of inferiority, insecurity, inequality, wrongdoing, or guilt and the tensions in home or in business may produce fear, anxiety, anger, hatred, or shame, any of which can cause an emotional turmoil upsetting to the autonomic nervous system and producing various syndromes.

Psychosomatic ills are becoming more apparent as the need increases for greater economic and social adaptability.

Psychotherapy and medical attention are both essential in treating these conditions.

A. J. MURCHISON, M.D.
Charlottetown, P.E.I.

Control of Seizures with Drugs*

Comment invited from Alan Douglas, M.D.

►TO THE EDITORS: It was with pleasure that I read Dr. William G. Lennox' excellent summary of the control of seizures with drugs. At a recent symposium on pediatric neurology held during the annual meeting of the American Academy of Paediatrics in Toronto, Dr. Francis McNaughton mentioned this paper as one of the best and most readily available guides to this problem.

Dr. Lennox is one of our North American pioneers in the field of clinical electroencephalography and over the past decade and a half has contributed largely to our increased understanding of the problems of the patient subject to seizures. His view has always been a broad one and has included the social and humanitarian aspects as well as the more technical phases.

His breadth of view is exemplified by his definition of the word "seizure," which is inclusive of all the phenomena which this term implies. One might disagree somewhat with his choice of the word "physiologic" by which he means that large group of epileptics which for years have been designated by the terms "idiopathic" or "essential." All these words are admittedly unsatisfactory and probably "seizures of undetermined origin" would be better than any of them.

To my mind, however, a seizure with its attendant dysrythmia is no more physiologic a state than is congestive heart failure. A physiologic state exists when the organism functions smoothly in response to the needs imposed upon it by its environment, both external and internal. When this smooth steady state is upset, the result is pathologic. I feel that a seizure is a pathologic response.

The drug treatment of seizures is fully covered. Mention might be made of the occasional value of amphetamine and belladonna in the control of the stubborn case of petit mal.

ALAN DOUGLAS, M.D.
London, Ont.

*MODERN MEDICINE, Mar. 1, 1951, p. 57.

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References: 1. Hufford, A.R.: J.A.M.A. 120:259 (1942)
2. Talisman, M.R.: Amer. Jnl. Obst. & Gyn. 46:248 (1943).

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Diagnostix

Here are diagnostic challenges presented as they confront the consultant from the first clue to the pathologic report. Diagnosis from the Clue requires unusual acumen and luck; from Part II, perspicacity; from Part III, discernment.

Case MM-212

THE CLUE

ATTENDING M.D: I would like your advice about a patient we've had in the hospital for the past month. He is 50 years old. His present illness began six months ago as Bell's palsy. Soon thereafter he had intermittent but progressive dyspnea. He came here a month ago because of extreme shortness of breath, blood-streaked sputum, and a temperature of 102 to 103°. His course has been unfavorable ever since.

VISITING M.D: Is he dying?

ATTENDING M.D: Wait a minute and you'll have the whole story. The patient's blood pressure is now 180/100 and the referring physician's note says that hypertension has been known for two years. His white blood cell count is 16,000 of which 90% are polymorphonuclears.

VISITING M.D: Anything more of interest in the history?

PART II

ATTENDING M.D: We can really find nothing pertinent in past or family history. A year ago he had left renal colic. He did not take the present illness seriously and worked until hemoptysis and fever started. He kept working even when he had Bell's palsy. He is now very weak. Since he has been in the hospital he has had diffuse chest pain. He is receiving penicillin.

VISITING M.D: (*Examining patient*) There are râles throughout both lung fields, but no percussion dullness, no adenopathy. How about exposure to tuberculosis? What are the reports on sputum, Mantoux, and chest roentgenogram?

ATTENDING M.D: No tubercle bacilli were found in three specimens of concentrated sputa. Pigs were injected two weeks ago and are still alive. The Mantoux reaction was negative. The chest film shows generalized spotty congestion. The radiologist is puzzled. It doesn't look like virus or bronchopneumonia nor like metastases, but could be primary lung tumor or Boeck's sarcoid. However, the radiologist thinks that it is probably inflammation, because the shadows appear and disappear in films made at different times.

VISITING M.D: Or allergy. He has obviously lost weight.

ATTENDING M.D: Yes, from 227 to 209 lb. His appetite is very poor.

VISITING M.D: Some neck vein distention, heart enlarged, systolic apical murmur, no edema, no palpable masses. Negative neurologic examination. The Bell's palsy has

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disappeared. No muscle weakness. Let's have the laboratory findings.

PART III

ATTENDING M.D: Urine has 3+ albumin, no sugar, specific gravity is 1.010. Red blood cells are 3,000,000. There is leukocytosis and . . .

VISITING M.D: Eosinophils?

ATTENDING M.D: We have had three differential counts; two had no eosinophils, one had 5%. Sputum is grossly bloody today. Bronchograms and bronchoscopic study are not helpful. Sedimentation rate is 42 mm. in one hour. The electrocardiogram shows left bundle-branch block and some effects of the digitalis he is taking. Temperature is from 99.8 to 103°. The roentgenogram yesterday was the same as that made two weeks ago. Blood urea nitrogen is 58, nonprotein nitrogen 105.

VISITING M.D: A 50-year-old man with progressive, perhaps fatal, disease, evidence of peripheral neuritis, seventh nerve involvement, transient leukocytosis, hypertension . . .

ATTENDING M.D: For two years.

VISITING M.D: Could still be part of the present disease. Predominant respiratory symptoms with consolidations that come and go, renal involvement, heart involvement, beginning uremia. Most complex . . . no nodes . . . could be a lymphoblastoma such as Hodgkin's or lymphosarcoma, but that would not explain everything. It's always nice to assume everything is due to one disease but such thinking is sometimes deceptive. Yet, in this case, I think it's not. Metastatic hypernephroma. . . . No, the pulmonary lesions don't behave like metastases. Blood agglutinations?

ATTENDING M.D: *Brucella* and tularemia, both negative.

VISITING M.D: The clue is the pulmonary disease which, I believe, is allergic. I think he has periarteritis nodosa.

ATTENDING M.D: Oh, no! No eosinophilia—

VISITING M.D: I'm willing to overlook that, once, of course.

ATTENDING M.D: Can you?

VISITING M.D: The protean symptoms, the involvement of many organ systems, nervous, renal, cardiac, the anemia, leukocytosis, and hypertension. Yes. We should have some muscle biopsies.

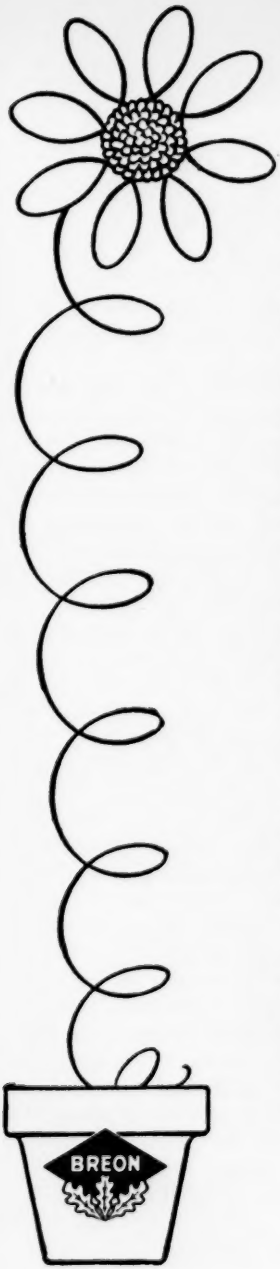
PART IV

ATTENDING M.D: What muscles? There is no tenderness or weakness, no nodules . . .

VISITING M.D: Then blindly—a small bite from the deltoid, the rectus, and the gastrocnemius.

PATHOLOGIST: (*One day later*) The rectus muscle shows definite medial necrosis of small arteries and of one medium sized artery. There is perivascular small cell infiltration. This is periarteritis nodosa, no doubt.

VISITING M.D: The significant thing about this case to me is that one must not insist on cardinal signs—eosinophilia, for example. We'll try some of the new drugs, hormones, and antihistamines, but I'm sure they will not alter the outcome.



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The family of the patient can be a powerful ally in the treatment of many psychiatric disorders.

The Doctor and the Patient's Relatives

R. F. TREDGOLD, M.D.
University College Hospital, London

SOME practitioners are inclined to champion the psychiatric patient against his relatives. This is occasionally justified and necessary for the patient's good but, ordinarily, psychiatric conditions are more likely to be alleviated if the doctor works in conjunction with the patient's relatives instead of ignoring or being antagonistic to them.

The doctor will, therefore, be well advised to call in the wife and other members of the family and work with and through them, points out R. F. Tredgold, M.D.

The physician must be prepared to explain the patient's needs in terms the relatives can understand if he hopes to win their wholehearted cooperation.

Simple psychosomatic conditions—The physician may be able to deal satisfactorily with functional ailments by reassurance and explanation, but success will not last much beyond the consultation if alarm and uncertainty are again generated by the home atmosphere. Therefore, the doctor should know the relatives and their usual attitude toward the patient and what place the patient occupies in the family.

The physician must also determine the patient's attitude toward the disease. To do this he must be prepared to discuss the patient's symptoms and behavior at home with the relations.

Explanations of the reasons for the physician's recommendations are very necessary. The happiest collaboration between family and doctor may perhaps be obtained if he can outline the general emotional attitude which is desirable and leave the relatives to supply the detailed plan of the campaign.

The patient's needs here are several: repeated reassurance, with a warning that the complaint will not clear up overnight, encouragement, with the gradual growth of confidence that the disability will be overcome, and diversion. The relatives can do a great deal with this last by putting other interests before the patient's mind and so preventing preoccupation.

Matters which the patient and the relations feel incapable of handling should be discussed with the doctor.

Simple anxiety states—The symptoms of an anxiety state are inability to concentrate or to relax, irritability, forgetfulness, and insomnia, all of which affect relatives, who must be led to regard this behavior as symptomatic of the illness and not as part of the patient.

(Continued on page 161)

The general practitioner and the patient's relatives. Practitioner 167:154-163, 1951.

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with **PHENOBARBITAL** . . . . **15 mg.**
When synergistic sedation is desired

DOSAGE

ADULTS: 2 capsules or 2 teaspoonfuls syrup 3 times daily, before or after meals. If necessary, repeat dose at bedtime.

IN INFANT COLIC: ½ to 1 teaspoonful syrup 3 times daily before feeding.[4]

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1. Hock, C. W.: J. Med. Assn. Ga. 40:22, 1951. 2. Hufford, A. R.: J. Mich. St. Med. Soc. 49:1308, 1950. 3. Chamberlin, D. T.: Gastroenterology 17:224, 1951. 4. Pakula, S. F.: Postgrad. Med. 11:123, 1952.

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Unfortunately, although interference with the function of leg or stomach by some organic illness is given sympathy, comparable interference with mental function is often not even tolerated.

Hysteria—The investigation and treatment of hysterical complaints is best left to the psychiatrist.

Antagonism between patient and relatives—If antagonism exists between patient and spouse, the one who is not the patient may regard the doctor as reinforcement for the enemy and be suspicious of the physician's influence. This attitude must be met by the doctor's assurance that he is not there to take sides. His aim is to improve the patient's health. If the patient's symptoms are in any way due to domestic difficulties, the doctor wishes to discuss the latter and to do his best to remove them. He realizes that friction is best ended by the satisfaction of both parties, not by the triumph of one over the other.

Probably the persons should be seen separately to avoid making the office a battleground.

Obsessions—Many obsessive conditions are ineradicable without studied and prolonged treatment which is hard to obtain. Palliative measures are therefore necessary. These can help the patient adapt to his symptoms and so live a normal life in their presence.

To accomplish this the patient must be freed of superficial anxiety, which is often superimposed. The symptoms must be discussed openly, the patient must report on what he has been able to do, and a sympathetic evaluation of progress must be made by both physician and relations.

To obtain an attitude of tolerance in the relatives, the doctor must be prepared to explain to them the genesis of obsessions, so far as may be comprehensible.

Depression—Patients with acute depression should usually be treated in a hospital. In less severe, long-standing cases, the hopelessness of the depression is apt to infect those in contact with the depressed patient. The most practical advice the physician can give is that the care of the patient should be divided among several people so that some sense of proportion may be retained.

Recovery is helped by an attitude of patience, cheerful tolerance, and repeated reassurance. Impatience or irritation is only too likely to encourage the patient to develop ideas of guilt or unworthiness.

If electroshock therapy is being given on an out-patient basis, the relatives should be warned to expect some temporary forgetfulness and difficulty in concentration.

Paranoid conditions—The psychiatrist should be called in for evaluation of the risk involved in letting a paranoid remain at liberty.

If the specialist decides little or no risk is involved in allowing the patient to remain at work, much can be done to aid the latter in carrying on a reasonable life. The nature of the patient's delusions must be explained to relatives and employers, who are warned to expect and accept occasional periods of irrational behavior.

The physician must always see the paranoid patient at regular intervals.

Basic Science Briefs

Pathogenesis

Enzymatic Activity in Rheumatoid Arthritis

Pitressin, an adenosintriphosphatase inhibitor, reduces pain, stiffness, and limitation of motion of patients with rheumatoid arthritis but not of those with trauma or osteoarthritis. Drs. George G. Haydu and B. William Haydu of Goldwater Memorial Hospital, New York City, interpret this action as an indication that heightened adenosintriphosphatase activity of tissues underlies the rheumatoid process. The short-term effect of pitressin begins half an hour after administration and continues into the next day; pronounced eosinophilia also develops and continues into the following day. No hemoconcentration occurs. Pitressin effect is not mediated through hyperfunction of the adrenal cortex.

Am. J. M. Sc. 223:1-8, 1952.

Experimental Medicine

Adrenalectomy in Diabetes

Dehydroascorbic acid diabetes in rats is ameliorated by removal of both adrenal glands. Administration of 0.8% sodium chloride to rats with dehydroascorbic acid diabetes significantly augments glycosuria, polyuria, polydipsia, and polyphagia and decreases hyperglycemia. In adrenalectomized dehydroascorbic acid diabetic rats maintained on saline, Dr. John W. Patterson of Western Reserve University, Cleveland, observes a further decrease in blood sugar but a reversal of the other symptoms of the salt effect. These findings are similar to the effects of adrenalectomy in alloxan and pancreoprive diabetes and are consistent with the concept that dehydroascorbic acid diabetes is a pancreatic form of the disease.

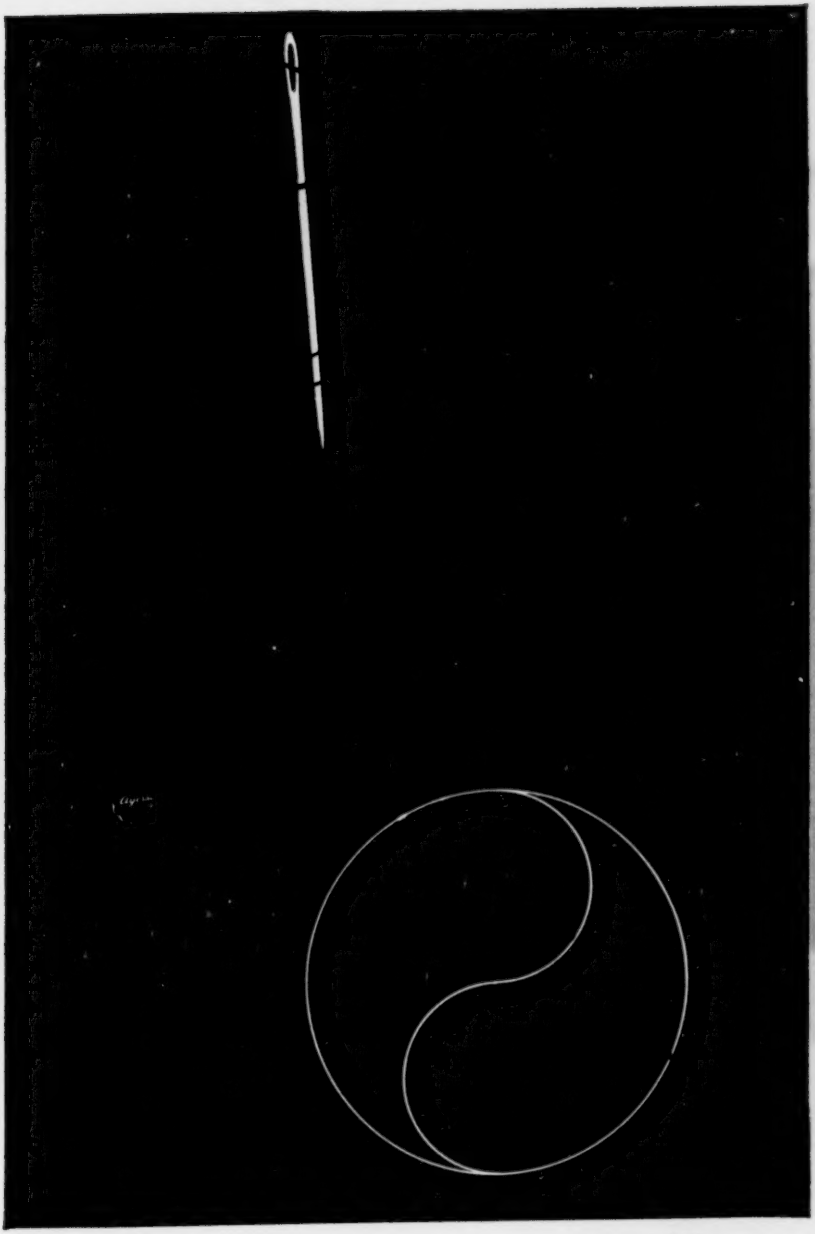
Proc. Soc. Exper. Biol. & Med. 78:758, 1951.

Tuberculosis

Bactericide in Tissue

Tubercle bacilli are apparently killed in vitro by spermine, a polyamine widely distributed in animal tissue. First found in human semen, the material also occurs in the prostate, pancreas, liver, muscle, adrenal, and other organs. Drs. James G. Hirsch and René J. Dubos of the Rockefeller Institute for Medical Research, New York City, isolated a crystalline substance from extracts of dried beef kidney in acidified dilute ethanol. The compound was equally active against virulent, attenuated, and avirulent types of human and bovine tubercle bacilli, though not as rapidly lethal as streptomycin. Little or no effect was produced on saprophytic mycobacteria and several nonacid-fast organisms, including hemolytic streptococci. The inhibitory factor was identified as spermine by chemical purification and analysis.

J. Exper. Med. 95:191-208, 1952.



Nellie Nifty, R.N.

by kaz

Short Reports

Biochemistry

Adrenal Catalyst

Pantothenic acid is essential for satisfactory functioning of the adrenal gland. Dr. George R. Cowgill of Yale University, New Haven, Conn., reports that production of cortisone and other adrenal hormones fails in rats fed diets lacking the B vitamin. Injected cortisone can replace the deficiency, but administration of pituitary ACTH intensifies the damage already caused in the adrenal gland by lack of pantothenic acid. Apparently the B vitamin acts as a catalyst in the adrenal synthesis of cortisone.

Radiology

Large Hilum with Lung Cancer

Before symptoms of bronchogenic carcinoma develop, enlargement of the hilum may be a warning sign. Half the lesions originate here, yet abnormal growth is often overlooked in roentgenograms made during mass surveys for tuberculosis. Measurement requires no special apparatus and only a few minutes of extra time. Dr. Leo G. Rigler and associates at the University of Minnesota and Veterans Administration Hospital, Minneapolis, noted that the diameters of hila were 3.5 to 8 cm. in 100 noncancerous persons and up to 11.5 cm. in 50 persons who ultimately had tumor. Only 10% of a healthy group have a hilum up to 7 cm. in width or a combined value over 13 cm. for both hila. A sum under 11 cm. indicates absence of malignant growth, but 42% of the cancerous group have diameters in the upper normal range. If the difference between right and left lung roots exceeds 1.5 cm., the larger harbors cancer in 9 of 10 instances.

Antibiotics

Inhibition of Moniliasis

Methyl and propyl paraben (parahydroxybenzoic acid) are of value in preventing the overgrowth of *Candida albicans* associated with aureomycin therapy. These agents, administered as a mixture of 142 mg. of methyl and 35.5 mg. of propyl paraben for a 250-mg. capsule of aureomycin, effect a 50% reduction in the number of stools positive for *C. albicans* after oral aureomycin. Similar results are obtained when mixtures of paraben are added to rectal capsules or vaginal suppositories, according to Drs. Leon V. McVay, Jr., and Douglas H. Sprunt of the University of Tennessee and John Gaston Hospital, Memphis. No toxic effects of these esters of paraben have been observed; symptoms of nausea, vomiting, and diarrhea were the same whether patients received aureomycin alone or with paraben.

Proc. Soc. Exper. Biol. & Med. 78:759-761, 1951.

Through the Menstrual Years of Life . . .

THE frequency with which the menstrual life of so many women is marred by functional aberrations that pass the borderline of physiologic limits, emphasizes the importance of an effective uterine tonic and regulator in the practicing physician's armamentarium.

In ERGOAPIOL (Smith) with SAVIN the action of all the alkaloids of ergot (prepared by hydro-alcoholic extraction) is synergistically enhanced by the presence of apiol and oil of savin. Its sustained tonic action on the uterus provides welcome relief by helping to induce local hyperemia, stimulating smooth, rhythmic uterine contractions and serving as a potent hemostatic agent to control excessive bleeding.

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DOSAGE
1-2 cap. 3-4 times daily

SUPPLIED
In stitrol pkgs. of 20 cap.

Parasitology

Drug for Amebiasis

Neomycin is an effective amebicide, although toxicity should be investigated thoroughly before general adoption. The only adverse reaction noted by Dr. Leon V. McVay, Jr., and associates of the University of Tennessee and John Gaston Hospital, Memphis, was transient elevation of blood urea nitrogen and nonprotein nitrogen and proteinuria in 1 of 8 cases. The most effective dosage was 50,000 units given orally every three hours for twelve days, a total of 4,800,000 units. Stools were examined repeatedly, since organisms occasionally appeared after twelve negative tests. With an adequate course, no recurrence was noted in one to three months of observation.

Am. J. M. Sc. 223:20-24, 1952.

Antibiotics

Repository Penicillin

After administration of the N,N'-dibenzylethylenediamine salt of penicillin G, blood levels of the antibiotic are detectable longer than after any other parenteral injection of aqueous salts of penicillin. According to Dr. William Elias and associates of the Jefferson Hospital, Philadelphia, a single aqueous intramuscular dose of 300,000 units of the salt is detectable in blood six days after administration. This repository penicillin salt may be suspended in peanut oil with 2% aluminum monostearate gels as well as in water for intramuscular use or in palatable aqueous emulsions for oral therapy. N,N'-dibenzylethylenediamine penicillin is tasteless, in contrast to the bitter flavor of procaine penicillin. Because of extended residual levels, cumulative effects are notable from multiple dosage. The most pronounced accumulation is observed when the 300,000 units of the salt are fortified with 100,000 units of potassium penicillin G and administered intramuscularly in the oily vehicle. This salt of penicillin exhibits no significant reduction of activity, ordinarily 1,200 units per milligram, when stored for a year at temperatures from 4 to 55°C. Toxic effects are negligible.

Antibiot. & Chemother. 1:491-498, 1951.

Radiology

Protective Garment

Lead glass fabric affords radiologists excellent protection against roentgen radiation. Dr. Vincent W. Archer and associates of the University of Virginia, Charlottesville, found that one thickness of this fabric is equivalent in protection to 0.035 mm. of sheet lead. A gown constructed with multiple layers to shield the parts of the body receiving the most radiation reduces exposure well below the present tolerance dose of 300 milliroentgens a week. The gown weighs 10½ lb. compared to 11 lb. for the conventional lead rubber apron which provides less over-all protection. Flexibility allows even distribution of weight over the body. The fabric is durable and washable and may be used in place of lead foil or lead rubber in superficial treatment or as curtains in radiology rooms. The material resists beta radiation of atomic fission products.

J. A. M. A. 148:106-108, 1952.

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1. Fisher, R. S. "Notes from The Office of the Chief Medical Examiner," Baltimore, Md., April, 1951.
2. Benson, R. A., et al.: "The Treatment of Ammonia Dermatitis with Diaparene," J. Ped. 34 1-49, Jan., 1949.
3. Niedelman, M. L., et al.: "Ammonia Dermatitis. Treatment with Diaparene Chloride Ointment," J. Ped. 37 5-762, Nov., 1950.

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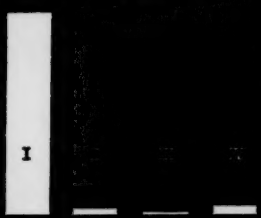

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Robins

Radiotherapy

Antibiotic before Irradiation

Severe radiation injury is often complicated by bacteremia, for which intestinal organisms are probably the source. Terramycin administered for only forty-eight hours preceding roentgen exposure of rats lowered mortality from 72 to 48%. A 10% aqueous solution of the hydrochloride was given orally, in five doses of 100 mg. each, at intervals of ten to fourteen hours. With seventy-two hours of pretreatment, Drs. Gordon E. Gustafson and Simon Koletsky of Western Reserve University, Cleveland, found that the death rate was reduced from 86% in unprotected animals to 32%.

Proc. Soc. Exper. Biol. & Med. 78:489-490, 1951.

Orthopedics

Stimulation of Retarded Bones

Foreign material inserted into long bone metaphyses accelerates the local growth. In 5 cases of leg length discrepancies due to poliomyelitis and in 1 case each due to congenital hypoplasia and to congenital dislocation of the hip with associated femoral hypoplasia, insertion of ivory, brass, stainless steel, vitallium, or vanadium screws stimulated the bone growth. Dr. Charles N. Pease of Children's Hospital, Chicago, prefers ivory screws because the material is eventually absorbed and not walled off by fibrous tissue as is metal. For sterilization, the ivory screws are placed in 95% alcohol in a loosely covered jar and subjected to 15 lb. of steam pressure for one hour. The patient is given a teaspoon to a tablespoon of phosphorized cod-liver oil daily for a month before the operation, the resultant layer of dense bone being used as a marker in roentgen measurements of post-operative growth. The screws are inserted transversely through a longitudinal incision at the end of the bone. Femur, tibia, or both may be stimulated. A small area of periosteum is stripped away and the screws driven into holes drilled deep enough to permit the distal end of the screw to extend just through the opposite cortex. Growth is accelerated for two to three years after the insertion. A second and even a third operation may be performed if additional stimulation is necessary.

J. Bone & Joint Surg. 34-A:1-23, 1952.

Physical Medicine

Microwave Diathermy for Large Body Areas

An elongated corner reflector called "director U" distributes deep-heating microwave radiations over body areas as large as 8 by 18 in. Dr. Frank H. Krusen of the Mayo Clinic, Rochester, Minn., reports that the director produces comparatively uniform heating of an entire leg or arm or large portions of the trunk. With the applicator placed 5 in. above the body surface, the area is heated uniformly in twenty to thirty minutes at a dosage of 120 to 150 ma. The length of the director makes application of microwave diathermy possible for many conditions which could not be treated effectively with the small directors previously available.

Arch. Phys. Med. 32:695-698, 1951.

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Nutrition

Prenatal Protein Intake

High protein consumption during pregnancy increases the likelihood of healthy babies. Dr. W. J. Dieckmann and associates of the Chicago Lying-In Hospital and University of Chicago report that pregnant women who take high levels of protein have fewer abortions and less weight gain than those not eating large amounts of protein. Protein intake has no relationship to toxemia, prematurity, duration of labor, or length and weight of babies at term. The incidence of anemia is increased in patients with low intake of protein.

J. Am. Dietetic A. 27:1046-1052, 1951.

Hematology

Polycythemic Blood for Purpura

Direct transfusion of compatible polycythemic blood may stop bleeding in thrombocytopenic purpura. A platelet-stimulating factor may be supplied in addition to platelets, comment Dr. Mario Stefanini and associates of the Joseph H. Pratt and New England Center hospitals and Tufts College, Boston. Fresh normal blood is fairly helpful, if the right precautions are taken to prevent destruction of thrombocytes during transfer. Blood is withdrawn and injected only by a silicone-coated apparatus, using a number of syringes rather than a closed system. Children receive 8 to 10 cc. of cell-rich blood per kilogram of body weight and adults 6 to 8 cc. In 14 cases of idiopathic thrombocytopenia, acute or chronic, injected platelets disappeared in twenty-four hours or less. In 8 secondary cases due to aplastic or hypoplastic anemia or subacute lymphatic leukemia, platelets survived two to four days, on the average. But hemorrhagic tendencies were reduced for many hours after thrombocytes fell to the original level. In 2 instances of primary purpura, the posttransfusion drop was succeeded by an increased platelet count and prolonged remission.

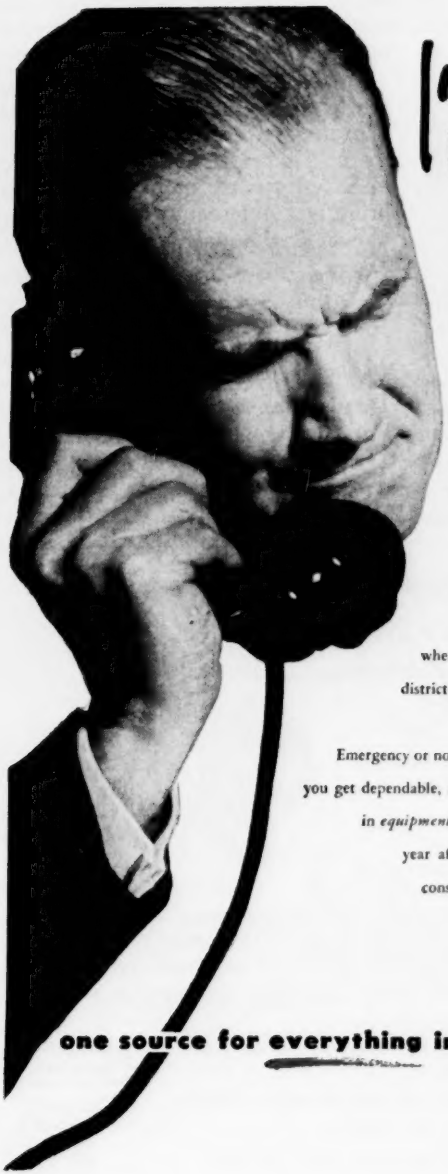
Blood 7:53-76, 1952.

Antibiotics

Fumagillin for Amebiasis

Endamoeba histolytica disappears from the stools of patients with amebic dysentery within forty-eight hours of the initiation of fumagillin therapy. Of 22 patients studied by Dr. John H. Killough and associates of U. S. Naval Medical Research Unit No. 3, Cairo, 21 had this favorable response when 10 to 50 mg. of fumagillin was given daily in divided amounts by mouth. This dose, although sufficient for slight and asymptomatic involvement, was not effective for a patient with severe ulcerative amebiasis even when continued for fourteen days. Simultaneous disappearance of *Escherichia coli, Giardia lamblia, Chilomastix mesnili,* and several other enteric protozoans was observed, although later studies demonstrate recurrences of these parasites at termination of therapy. Fumagillin was not active against parasitic helminths. The drug had no deleterious effects on liver, kidney, or heart. Subjective symptoms of dizziness and loss of appetite were apparent for a few patients with the 50-mg. dosage.

Science 115:71-72, 1952.



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End ocrinology

Cortisone Toxicity

The toxic effects of large doses of cortisone acetate in immature rats may be counteracted by liver feeding. Rats fed basal diets containing 200 to 400 mg. of cortisone acetate have retarded growth, alopecia, and reduced eosinophils and lymphocytes with correspondingly increased polymorphonuclear leukocytes. Dried liver powder added to the cortisone acetate diet allows normal body and hair growth but does not alter the toxic blood picture. When all known B vitamins including pantothenic acid, biotin, para-aminobenzoic acid, and inositol are added to the cortisone acetate diet, the effects of toxicity are still apparent. Liver added to this diet likewise reverses the growth retardation. Dr. Benjamin H. Ershoff of the Emory W. Thurston Laboratories, Los Angeles, interprets this to mean that liver has a protective factor, possibly similar to the factors which counteract the toxic effects of thyroxine or atabrine, yet different from any of the known B vitamins.

Proc. Soc. Exper. Biol. & Med. 78:836-840, 1951.

Organizations

Heads Clinics Group

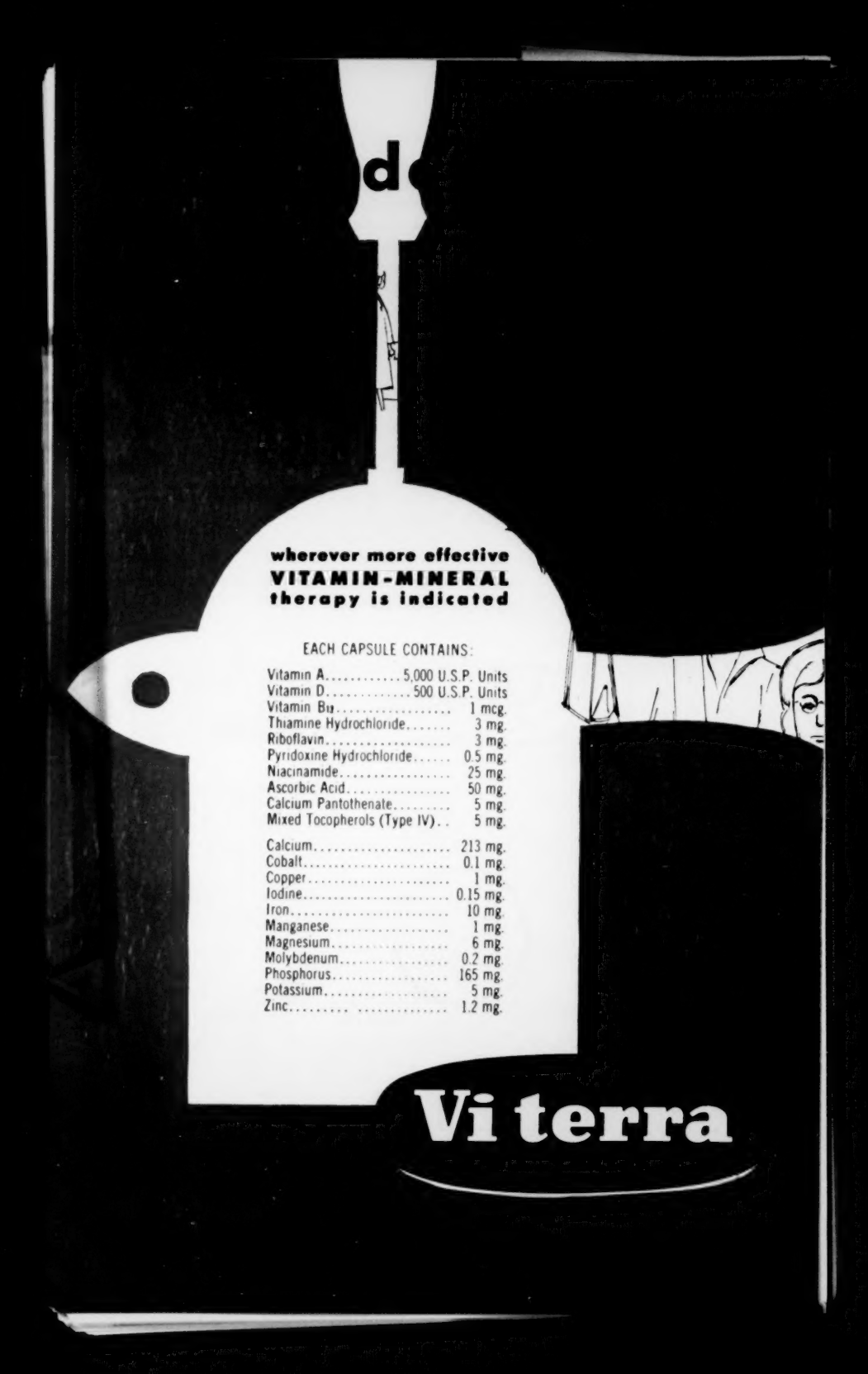
Dr. Dean H. Echols of Tulane University, New Orleans, has been elected president of the American Association of Medical Clinics.

Epidemiology

Influenza Virus

The determining factor in the influenza pandemic of 1918 may be explained by recent investigations in virology. Among four new virus strains isolated in England during 1951, amazingly rapid variation for the worse was seen in two types, which became extremely virulent for chick embryos after few amniotic passes. A variation of this type occurring in the course of epidemic transmission from man to man may have been the crucial factor in the 1918 pandemic. Both of the recent strains were readily adapted to mice. The human donors were not seriously ill, and at the same time, epidemic influenza was fairly harmless throughout the world with one exception: Liverpool, where mortality was almost as high as in 1918-19. Dr. Wilson Smith and associates of University College Hospital Medical School found the new types closely related to the standard A-prime reference strain F.M.1. A unique difference from all known influenzal strains was the sensitivity of the viruses to a second hemagglutination inhibitor observed for the first time in normal rabbit serum. The two inhibitors differed in action against viruses and in susceptibility to the receptor-destroying enzyme prepared from *Vibrio cholerae*. Evidence of neurotropic properties were discovered in one strain studied.

Lancet 261:1189-1193, 1951.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"As important as food is in the treatment and rehabilitation of persons with nutritive failure, it is inadvisable and impracticable to depend on diet therapy alone . . . many of the essential nutrients of food occur only in trivial amounts. Even the most carefully planned diets supply relatively little more than maintenance requirements of some nutrients."[1]

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In the many conditions in which nutritional deficiency is suspected or apparent, VI TERRA affords true nutritional supplementation. VI TERRA protects the patient against nutritive failure, furnishing not only adequate amounts of 10 Vitamins, but also 11 Minerals and Trace Elements for comprehensive dietary supplementation.

1. Spies, T. D.: Section on "Metabolism and Nutrition," 1948 Year Book of Endocrinology, Metabolism, and Nutrition. (Chicago: Year Book Publishers, Inc.), p. 265

Chemurgy

Talcum Substitute

Soluble laminarin, a polysaccharide derived from seaweed, is suitable for use as a surgical talcum powder. The carbohydrate is extracted from seaweed, *Laminaria cloustoni* or *L. digitata,* by dilute aqueous mineral acids. Steam at pressure of 20 lb. per square inch for thirty minutes or dry heat at 150° C. for one hour renders laminarin sterile. Higher temperatures cause caramelization. Dr. George Blaine of the Royal Veterinary College, London, found the powder nontoxic and nonproductive of adhesions or kidney damage when introduced into the peritoneal cavity of animals in soluble form. Laminarin should be a satisfactory absorbable talcum substitute for surgical use.

M. Press 5876:611-612, 1951.

Gastrology

Histamine Substitute

A less toxic substitute for histamine for study of gastric secretion in man appears to have been found in an analog of histamine, 3-β-aminoethyl pyrazole. Dr. Joseph B. Kirsner and associates of the University of Chicago and Mount Sinai Hospital, Cleveland, report that the secretory response to 50 mg. given intramuscularly approximates that elicited by histamine.

Gastroenterology 20:138-142, 1952.

Our Office Nurse

Think of a gag that fits the illustration. For every issue a new gag is published and the author is sent $5. The April 1 winner is

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"It is not Korea formed movements. The patient had choreiform movements."

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ATELEKTASEN DER LUNGE: DIE VERSCHIEDENEN FORMEN, IHRE ENTSTEHUNG UND BEDEUTUNG *by* Hanns Alexander. 58 pp., ill. Georg Thieme, Stuttgart. 8.70 DM.

DIABETES MELLITUS *edited by* R. Boller. 671 pp., ill. Urban & Schwarzenberg, Vienna. 165 Sch.

CLINICAL METHODS: A GUIDE TO THE PRACTICAL STUDY OF MEDICINE *by* Sir Robert Hutchinson *and* Donald Hunter. 12th ed. 484 pp., ill. J. B. Lippincott Co., Philadelphia. $5

Gynecology & Obstetrics

HEART DISEASE IN PREGNANCY *by* A. Morgan Jones. 57 pp., ill. Grune & Stratton, New York City. $1.50

CLINICAL AND ROENTGENOLOGIC EVALUATION OF THE PELVIS IN OBSTETRICS *by* Howard C. Moloy. 119 pp., ill. W. B. Saunders Co., Philadelphia. $2.50

RELIEF OF PAIN IN CHILDBIRTH: A HANDBOOK FOR THE GENERAL PRACTITIONER *by* W. C. W. Nixon *and* Shila G. Ransom. 116 pp., ill. Cassell & Co., London. 7*s.* 6*d.*

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80% Controlled—"Using the crystalline preparation (KHELLOYD), we were able to control the anginal symptoms in eighty-percent of the patients treated . . ."

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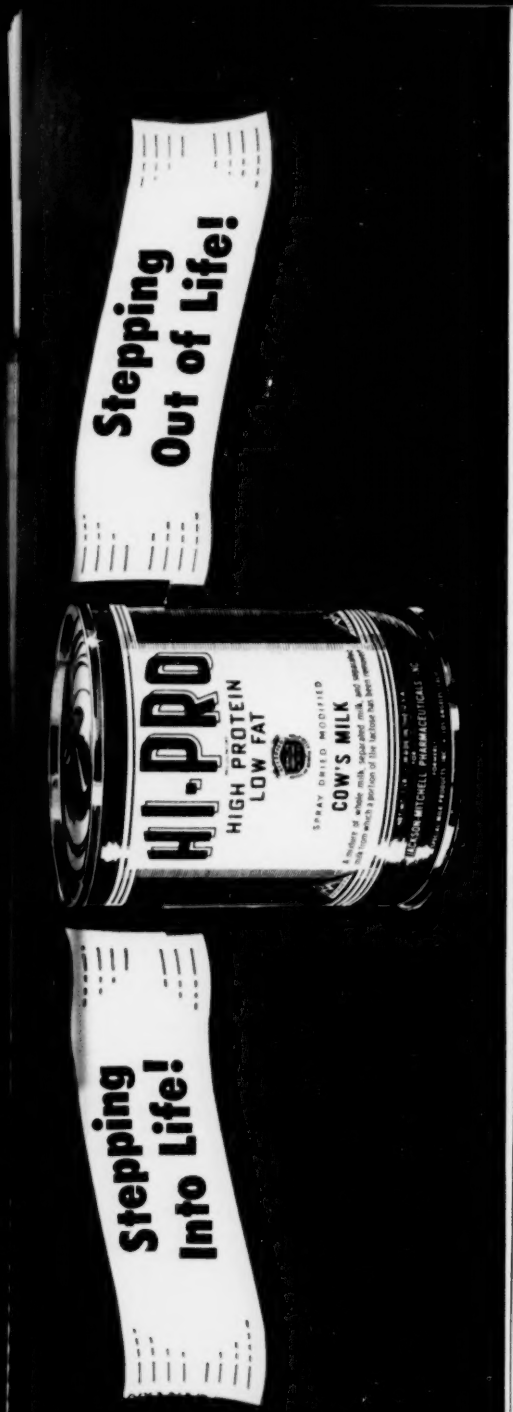

Neurology

DISEASES OF THE NERVOUS SYSTEM *by* W. Russell Brain. 4th ed. 1,002 pp., ill. Oxford University Press, London. 42*s*.

THE ELECTRICAL ACTIVITY OF THE NERVOUS SYSTEM *by* Mary A. B. Brazier. 220 pp., ill. Sir Isaac Pitman, London. 25*s*.

DIE NERVENKRANKHEITEN *by* Georges Schaltenbrand. 880 pp., ill. Georg Thieme, Stuttgart. 87 DM.

Surgery

YOUR MIND AND YOUR APPEARANCE: A PSYCHOLOGICAL APPROACH TO PLASTIC SURGERY *by* Adolph Abraham Apton. 223 pp., ill. Citadel Press, New York City. $3

SURGICAL TREATMENT OF THE MOTOR-SKELETAL SYSTEM *edited by* Frederic W. Bancroft *and* Henry C. Marble. 2d ed. 2 vols., 1,303 pp., ill. J. B. Lippincott Co., Philadelphia. $24

SURGICAL PRACTICE OF THE LAHEY CLINIC *by* Staff of the Lahey Clinic, Boston. 1,014 pp., ill. W. B. Saunders Co., Philadelphia. $15

Psychiatry

TEXTBOOK OF PSYCHIATRY *by* Eugen Paul Bleuler; *translated by* A. A. Brill. 2d ed. 635 pp., ill. Dover Publications, New York City. $7.50

DIE NARKOANALYSE ALS INITIALE METHODE IN DER PSYCHOTHERAPIE *by* C. Fervers. 120 pp., ill. J. F. Lehmanns, Munich. 10 DM.

MENTAL HEALTH AND THE PREVENTION OF NEUROSIS *by* Joachim Flescher. 608 pp. Liveright Publishers, New York City. $5.95

PATHOLOGICAL FIRESETTING (PYROMANIA) *by* Nolan D. C. Lewis *and* Helen Yarnell. 437 pp. Nervous and Mental Disease Monographs, New York City. $10

NERVOUS DISORDERS AND RELIGION *by* J. G. McKenzie. 183 pp. George Allen & Unwin, London. 9*s*. 6*d*.

AUTOBIOGRAPHY OF A SCHIZOPHRENIC GIRL *by* Marguerite Sechehaye; *translated by* Grace Rubin-Rabson. 161 pp. Grune & Stratton, New York City. $2.75

Ophthalmology

TEXTBOOK OF REFRACTION *by* Edwin Forbes Tait. 418 pp. W. B. Saunders Co., Philadelphia. $8

Antibiotics

ANTIBIOTICS *by* Sir Howard Florey. 35 pp., ill. Blackwell Scientific Publications, Oxford. 6*s*.

A DICTIONARY OF ANTIBIOSIS *by* Leonard Karel *and* Elizabeth Spencer Roach. 373 pp., ill. Columbia University Press, New York City. $8.50

ANTIBIOTIC THERAPY *by* Henry Welch *and* Charles N. Lewis. 626 pp., ill. Arundel Press, Washington, D.C. $10

Anesthesia

ANESTHESIA IN GENERAL PRACTICE *by* Stuart C. Cullen. 3d ed. 292 pp., ill. Year Book Publishers, Chicago. $4.50

INHALATION ANESTHESIA: A FUNDAMENTAL GUIDE *by* Arthur E. Guedel. 2d ed. 144 pp. Macmillan Co., New York City. $3.75

THE MODE OF ACTION OF ANAESTHETICS *by* Thomas Alexander Britten Harris. 716 pp., ill. E. & S. Livingstone, Edinburgh. 42*s*.

CHLOROFORM: A STUDY AFTER 100 YEARS *edited by* Ralph M. Waters. 138 pp., ill. University of Wisconsin Press, Madison. $2.75

Otolaryngology

MODERN MEDICATION OF THE EAR, NOSE AND THROAT *by* Noah D. Fabricant. 245 pp., ill. Grune & Stratton, New York City. $5.75

UBER DIE PETROSITIS *by* Otto Mayer. 99 pp., ill. Wilhelm Maudrich, Vienna. 36 Sch.

TONSIL AND ALLIED PROBLEMS *by* Roy H. Parkinson. 432 pp., ill. Macmillan Co., New York City. $12

DISEASES OF THE EAR, NOSE AND THROAT *by* Georges Portmann; *translated by* Fernand Monteuil *and* Jules Waltner. 728 pp., ill. Williams & Wilkins Co., Baltimore. $20

THE RATIONAL TREATMENT OF CATARRH *by* William Annandale Troup. 96 pp., ill. Chaterson, Ltd., London. 10*s*. 6*d*.

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PATIENTS ... *I Have Met*

The editors will pay $1 for each story published. No contributions will be returned. Send your experiences to the Patients I Have Met Editor, MODERN MEDICINE, 84 South Tenth St., Minneapolis 3, Minn.

Reasonable Doubt

One of my patients was having children too often for her own good. I spoke to her husband and he agreed that the family was big enough.

"If we have another baby, I'll kill myself," he told me.

A short time later his wife came in, pregnant again.

The next time I saw her husband I said angrily, "Now what have you got to say for yourself?"

"Now, Doctor," he said, "take it easy. When Mary said she was going to have another, I went right out to the barn, threw a rope over the rafters and stood on the oatbin with the loop around my neck. Then I thought maybe I was hanging an innocent man, so I changed my mind."—Z.T.

"Something's wrong with this diet, Doctor. With no bread what am I going to use to pick up the gravy?"—J. T.

*"The minor and major, overt and hidden, temporary and continuing effects on the human body and mind of insufficiency of iodine in the diet . . ."**

ORGANIDIN®

A Demonstrably Superior Iodine Preparation For Internal Use

Recent editorial comment* emphasizes the importance of providing enough iodine in the diet, citing endemic iodine deficiency and trade experience showing substantial loss of iodine from table salt during transportation and storage. A long-range program is recommended to make fully potent iodized table salt universally available to the exclusion of the noniodized variety.

Elevation of blood pressure, with nervous excitement, sleeplessness, tremor and tachycardia may be induced, at least in part, through marginal, often unrecognized deficiencies of iodine. In such conditions empiric administration of iodine may prove beneficial. And in frank hyperthyroidism, iodine therapy is of course definitely indicated.

Organidin (Wampole) is an exceptionally well tolerated, unique preparation of iodine organically combined by reaction with glycerin for internal administration, entirely free of inorganic iodides, negative to starch test solution, and standardized to contain 2.5 Gm. of iodine per 100 cc. Bottles of 30 cc. with dropper (1 minim per drop). *Samples and literature on request.*

*Editorial Comment: N.Y. State J. Med. :2770, 1949.

HENRY K. WAMPOLE & CO., INCORPORATED
Manufacturing Pharmacists Since 1872
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Not a Weatherman

I had delivered the patient of a fine baby boy. The next morning while making the rounds, I stopped in her room for a visit.

"Well," I inquired in a breezy fashion, "how is the son and heir this morning?"

"I wouldn't know," replied the patient dryly. "I haven't been outdoors this morning."—J.F.T.

Under Pressure

One of my patients came in for a prenatal shot in the arm. She brought one of her youngsters into the consulting room with her. As my nurse handed me the syringe, the tot exclaimed, "Mama, is he going to pump you full of air with that?"

The women smiled wearily and said, "No, dear. Your daddy has already filled me full of heir."—J.S.B.

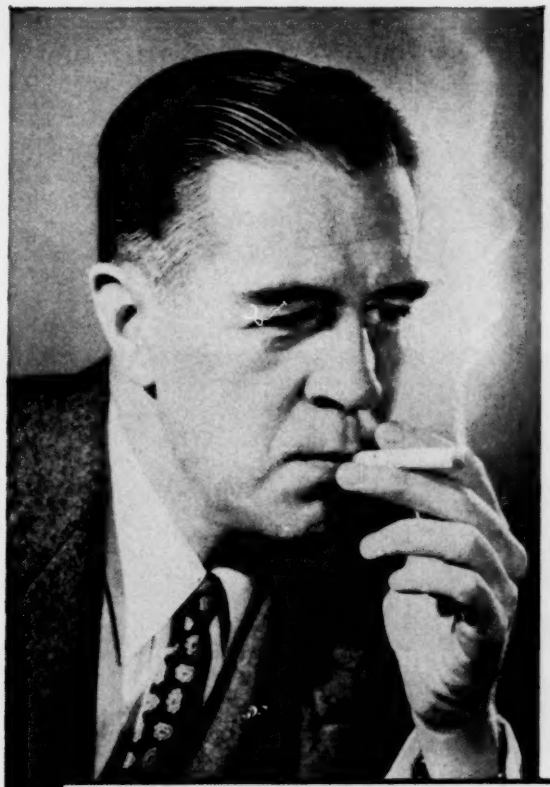
Perseverance Wins

A young husband and his wife came into my office one day. The woman told me she thought she was going to have a baby.

"How many times have you missed?" I asked.

She hesitated a moment and then turned to her husband.

"I guess we haven't missed a night, have we?"—J.F.



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With so many claims made in cigarette advertising, you, Doctor, no doubt prefer to judge for yourself. So won't you make this simple test?

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1. Light up either one first. Take a puff—get a good mouthful of smoke—and s-l-o-w-l-y let the smoke come *directly* through your nose.
2. Now, do exactly the same thing with the other cigarette.

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this preparation is indicated in:

Pneumonia	Acute sinusitis
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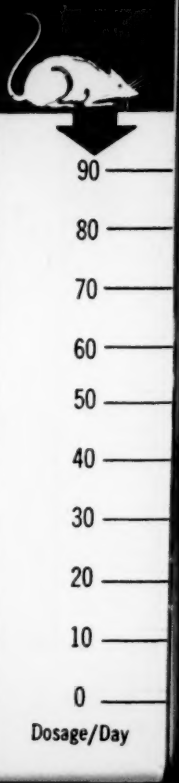
Nasal pharyngitis	Tonsillitis
Streptococcal sore throat	Otitis media
Bacillary dysentery	Urinary tract infections

(formerly 'Eskacillin-Sulfas')

the original and outstanding
penicillin-sulfonamide combination



this preparation has important advantages:

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2. Potentiation of antibacterial intensity in certain infections (see graphs).
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'Eskacillin 100-Sulfas' is so pleasant-tasting that children enjoy taking whatever amount you prescribe. You will find this fluid penicillin-sulfonamide combination a logical preparation to use in treating many of the common bacterial infections of childhood.

Formula: Each teaspoonful (5 cc.) supplies: crystalline potassium penicillin G, 100,000 Units; sulfadiazine, 0.167 Gm.; sulfamerazine, 0.167 Gm.; sulfamethazine, 0.167 Gm.

Available: On prescription only, in 2 fl. oz. bottles.

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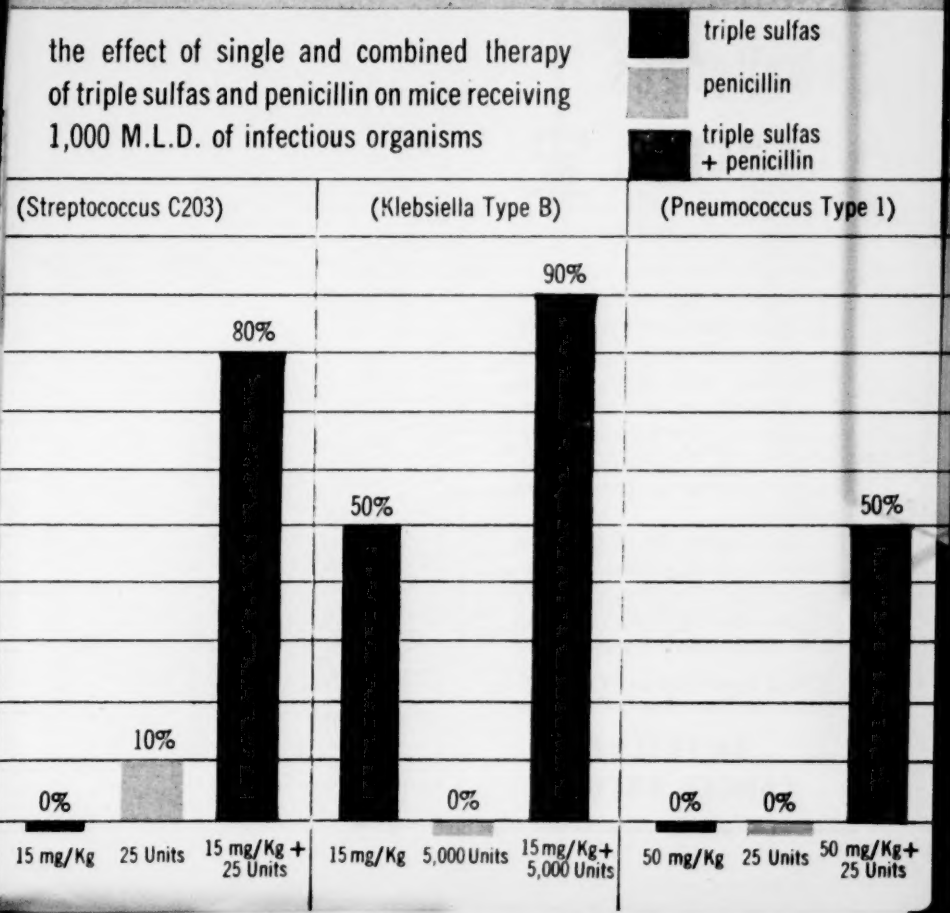
the effect of single and combined therapy of triple sulfas and penicillin on mice receiving 1,000 M.L.D. of infectious organisms



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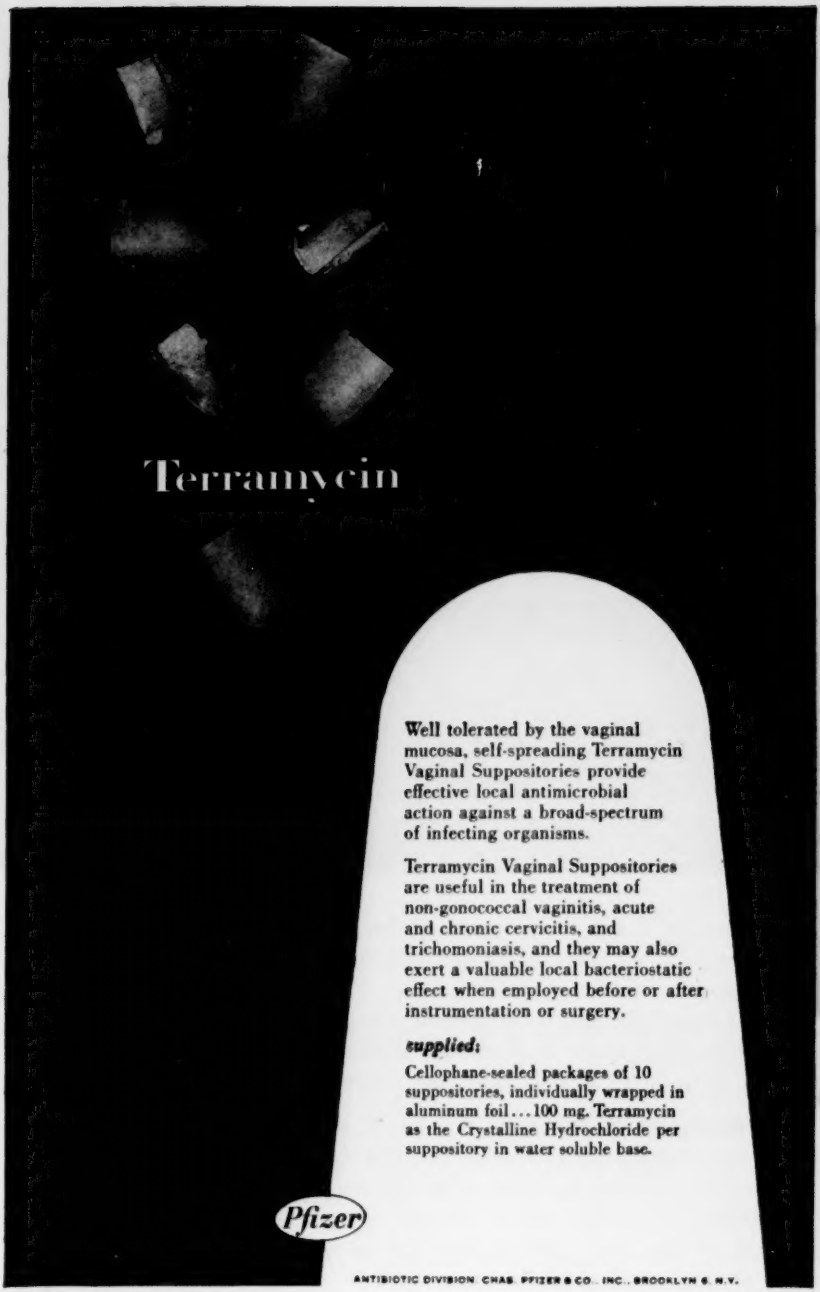

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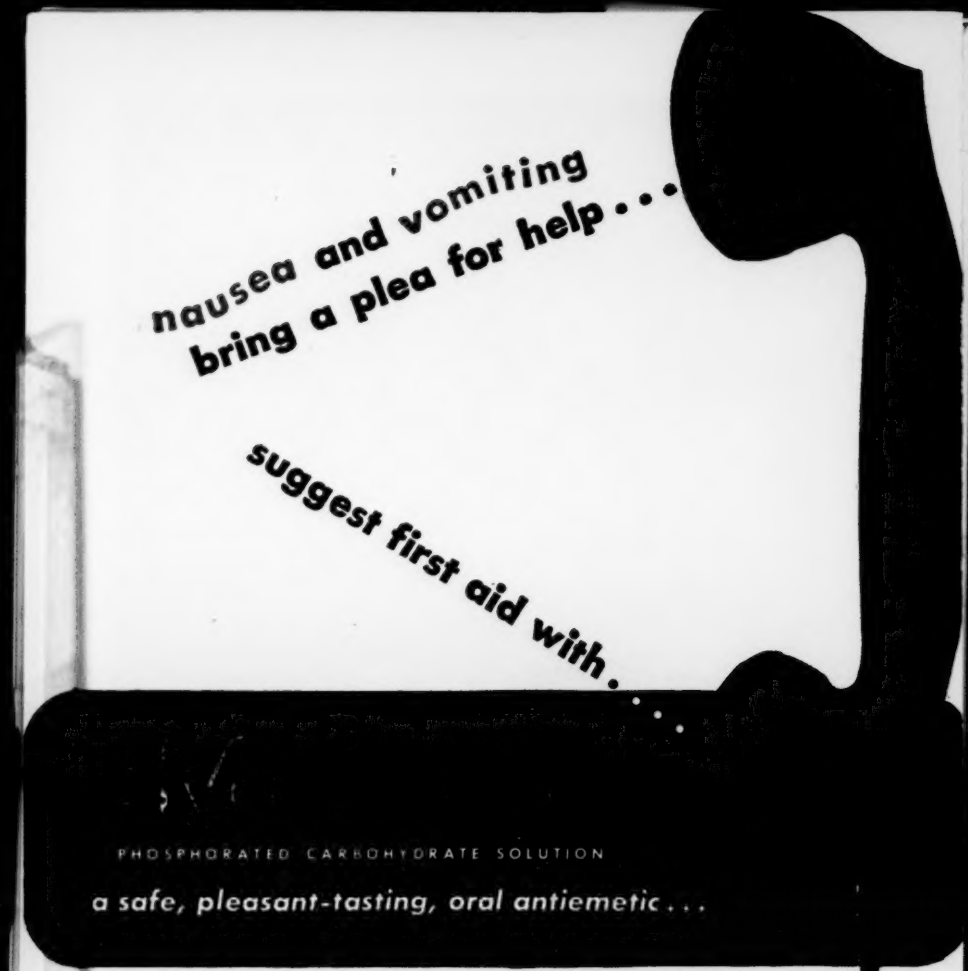

effective in 6 out of 7 cases of functional vomiting[1] . . . reduces gastrointestinal smooth muscle contractions physiologically . . . contains no antihistaminics, barbiturates, or other drugs . . . also useful in nausea of pregnancy, and for drug- or anesthetic-induced vomiting

IMPORTANT: **EMETROL** is stabilized at an optimal physiologic pH level. Dilution would upset this careful balance. For this reason, **EMETROL** is always taken straight, and no fluids of any kind are allowed for at least 15 minutes after administration.

1. Bradley, J. E., et al.: J. Pediat. 38:41, 1951; idem: Amer. Acad. Pediat., meeting Oct. 16, 1951.

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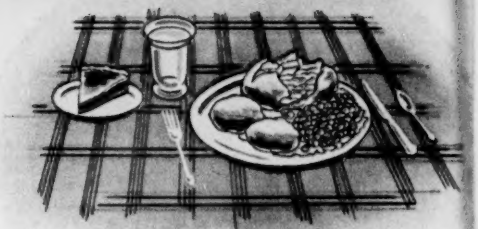

Water retention (excessive gain in weight—pitting edema) is quite common in pregnancy. Sodium, particularly if used excessively, accelerates this process. Vice versa, sodium restriction can prevent water retention.

Neocurtasal, completely sodium free salt, palatably seasons low sodium diets. Neocurtasal looks, tastes, and is used like ordinary table salt.

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Note this evidence of the value of Pyribenzamine Cream in antibiotic skin reactions: Simon,[1] although he found other antihistaminics of little help in treating streptomycin sensitivity, reported: "Results were obtained immediately and cure in a short period of time . . . by the application of 2 per cent Pyribenzamine cream daily to the lesions themselves and administration of 50 mg. of Pyribenzamine internally four times a day."

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Ciba *Summit, N.J.*

1. Simon, S. W.: J. Allergy, 20:56, 1949.

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